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BEFORE THE
POSTAL RATE COMMISSION
WASHINGTON, D.C. 20268-0001

MAILING ONLINE SERVICE

Docket No. MC98-1

DIRECT TESTIMONY
OF
PAUL G. SECKAR
ON BEHALF OF
UNITED STATES POSTAL SERVICE

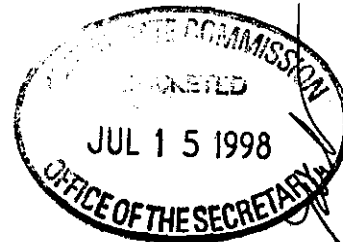


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LIST OF SUPPORTING LIBRARY REFERENCES:

3: Supporting Materials for USPS-T-2

4: Electronic Copy of Exhibit USPS-2A

DIRECT TESTIMONY OF PAUL G. SECKAR
AUTOBIOGRAPHICAL SKETCH

My name is Paul G. Seckar. I am a Principal Consultant with the Government Consulting group at PricewaterhouseCoopers, LLP. I have held this position since July of 1995. Prior to that, I was a Senior Consultant within Price Waterhouse's Office of Government Services, dating back to the initiation of my employment in July of 1993.

My work at Price Waterhouse, LLP and PricewaterhouseCoopers, LLP has been devoted to serving the United States Postal Service. I am currently a member of the Postal Industry initiative that specializes in consulting to postal administrations. My areas of study have been cost estimation, statistical and other special studies, and other pertinent financial and economic studies. I presented testimony in Docket No. MC96-2 on Periodicals mail processing costs, and Docket No. R97-1 on flats mail processing costs.

Prior to joining Price Waterhouse, LLP, I was employed by the Naval Center for Cost Analysis in Arlington, VA. My primary responsibility was developing cost estimates of Naval Weapon Systems.

I hold a Master's of Science Degree in Statistical Science from George Mason University. I completed my Bachelor's of Science Degree at the Pennsylvania State University, majoring in mathematics, with a minor in statistics.

1 **I. PURPOSE OF TESTIMONY**

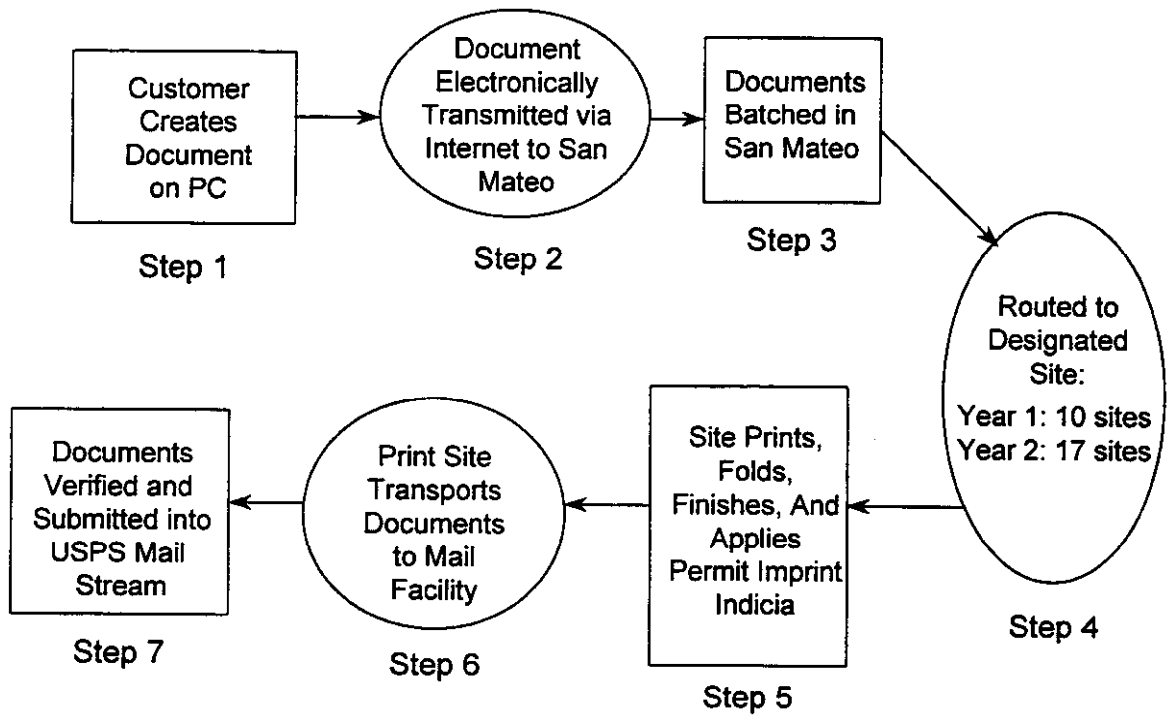
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3 The purpose of this testimony is to estimate costs for Mailing Online.
4 Specifically, this testimony defines and quantifies the cost equation to which witness
5 Plunkett's markup can be applied. This testimony examines only the attributable
6 costs that occur prior to entry of mail at a postal facility. This testimony describes
7 and estimates costs for the various processing components of Mailing Online, from
8 the moment a customer sends an electronic document to the computer operations
9 center in San Mateo until the moment the local printer deposits the printed, finished
10 document at the nearest mail facility. See Diagram 1 (flow diagram of production
11 steps for Mailing Online mailpiece.)

12 The remainder of this testimony is devoted to a summary of results, a
13 discussion of the cost development methodology, and an exhibit containing the cost
14 model.

Diagram 1

Mailing Online Flow Process



1 **II. SUMMARY OF RESULTS**

2

3 In the printing industry, many document types can be produced, and
4 Mailing Online documents are no exception. A finished Mailing Online mailpiece
5 could have any number of defining attributes. For example, a finished piece
6 could consist of anywhere from one to forty-eight pages; the pages could be
7 simplex or duplex, black and white or spot color, and printed on 8.5x11, 8.5x14,
8 or 11x17 size paper. In the absence of comprehensive volume projections for
9 each possible permutation, simplifying assumptions necessarily facilitate the
10 generation of reasonable volume and consequent cost projections. The results
11 presented herein accordingly use the available information to project total "pre-
12 mail" or production costs for the following: 8.5x11 and 8.5x14 black and white
13 impressions; 11x17 black and white impressions; and 8.5x11 and 8.5x14 spot
14 color impressions.¹ After calculating impression costs for a document, paper and
15 envelope costs are added depending on the document size and shape. Finally,
16 insertion and transportation costs for both letters and flats are added. These
17 costs are added to the Postal Service's information systems costs, presented by
18 witness Stirewalt.

19 This approach permits projection of combinations of Mailing Online print
20 options to produce costs for a wide variety of permutations. For example, an
21 8.5x14, duplex, spot color, twenty-page document consists of forty 8.5x14 spot
22 color impressions, twenty sheets of 8.5x14 paper, and a flat envelope. Table 1

¹ An "impression" refers to printing on one side of a piece of paper. A duplex page has impressions on both sides of the paper.

1 illustrates total costs per impression for 1999, and Table 2 illustrates various
2 paper and envelope costs. Tables 3 and 4 show insertion and transportation
3 costs, respectively. Exhibit USPS-2A presents the detailed development of these
4 costs. Library reference 4 presents the electronic version of Exhibit A.

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USPS-T-2, Docket No. MC98-1, p. 5
Revised August 10, 1998

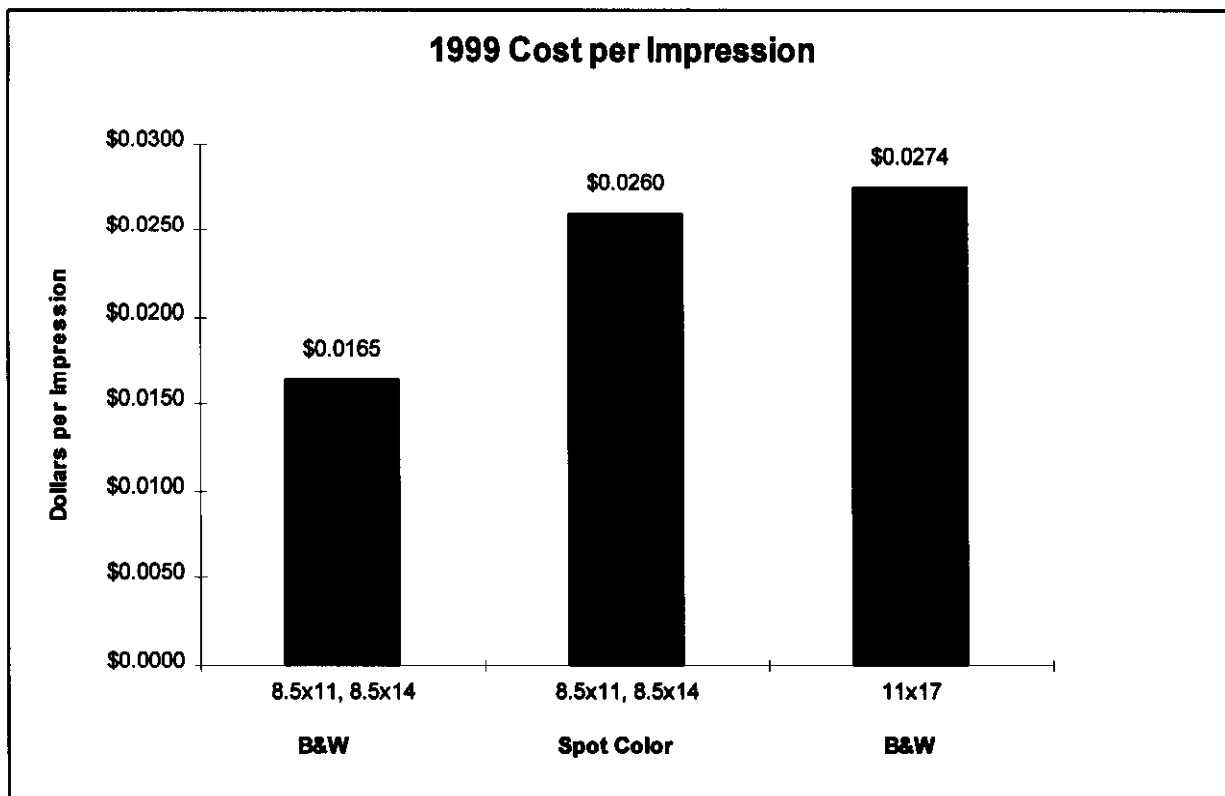
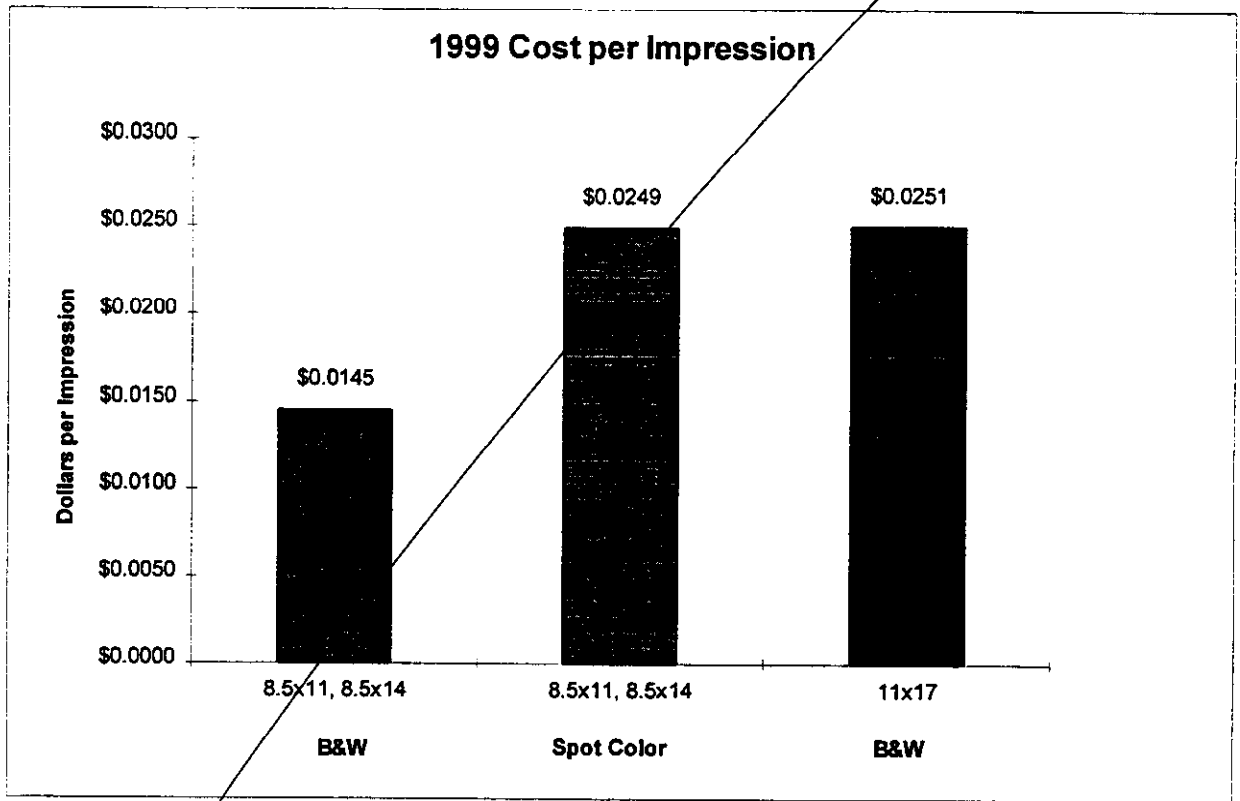
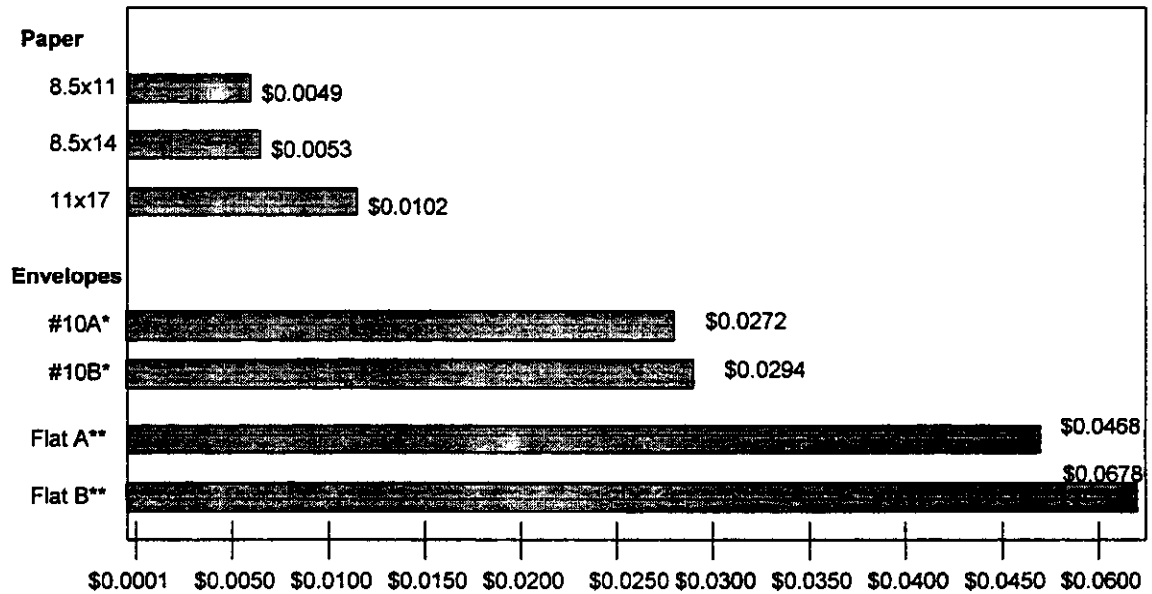


Table 1



From LR-3/MC98-1, Table 1

Table 2
1999 Paper & Envelope Costs

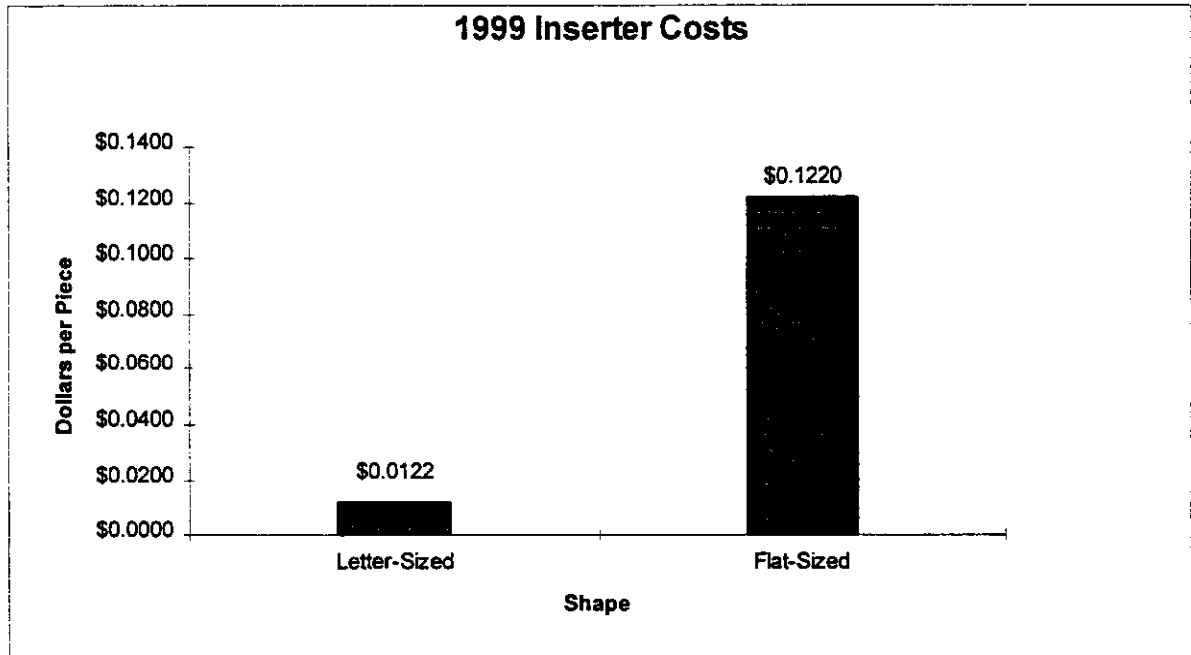


*#10A: no window & logo, #10B single window & logo

**Flat A: 9x12 no window, no logo; Flat B: 9x12 no window, logo

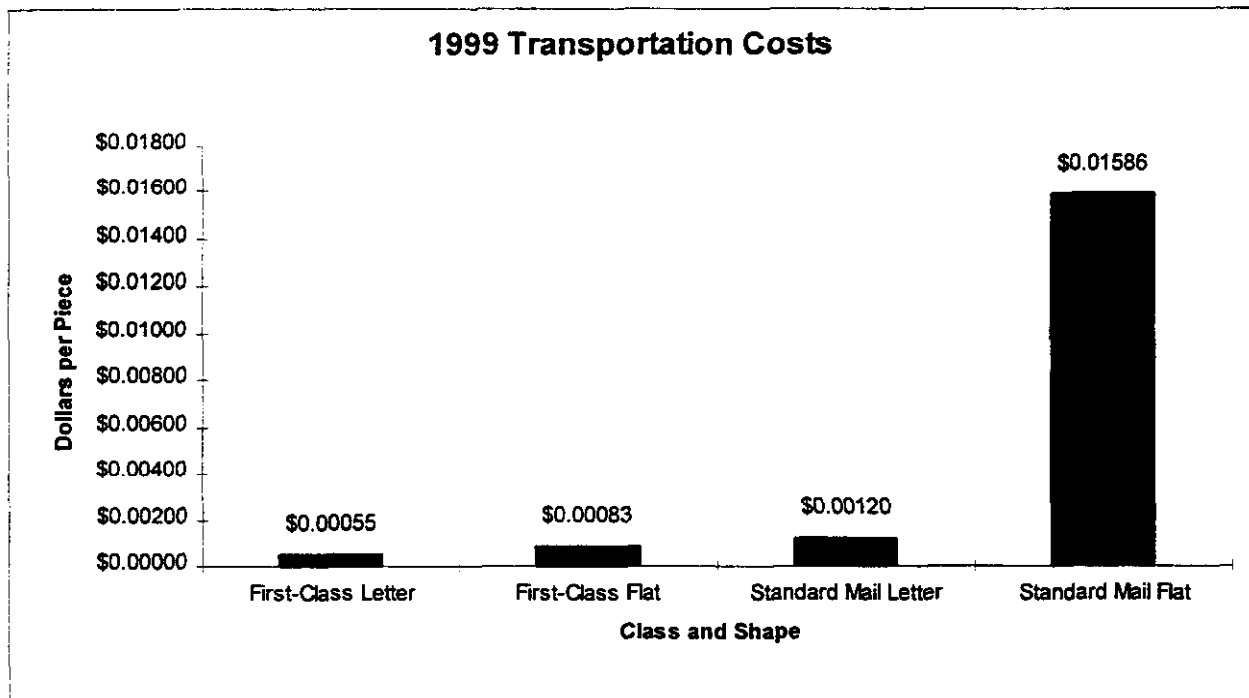
From LR-3/MC98-1, Table 16

Table 3



From LR-3/MC98-1, Table 2

Table 4



From LR-3/MC98-1, Table 3

1 **III. COST DEVELOPMENT**

2

3 **A. OVERVIEW OF METHODOLOGY**

4

5 The Mailing Online cost equation consists of two types of costs, both of which
6 are attributable. The first contains the start-up and recurring costs incurred first-hand
7 by the Postal Service. The second contains printing, inserting, and transportation
8 costs incurred by a print provider with whom the Postal Service will contract. Thus,
9 the cost equation can be specified as:

10

11 Mailing Online Cost = $c_{usps} + c_{contract}$

12

13 Costs borne directly by the Postal Service are incurred during steps 2 through
14 4 of the Mailing Online process illustrated in Diagram 1. The first step consists of a
15 customer using any one of a number of software packages to create a document.
16 The customer sends the completed document electronically, using the internet, along
17 with its accompanying address list to the Postal Service computing center in San
18 Mateo, CA (step 2), where documents are batched with other files (step 3). Next,
19 batches are sent to various contractual print sites around the country as dictated by
20 respective destinating addresses of the particular batches (step 4). More specifically,
21 a batch is sent to the print site that is geographically closest to the intended
22 destinations.

23 The second type of costs are those incurred by the contracted print providers

1 and passed on to the Postal Service. These costs are estimated based on
2 equipment, personnel, and other cost components for a geographically average
3 digital print operation.

4 In estimating the contractual print site costs, the Mailing Online market
5 research results constitute a key input. See LR-2/MC98-1, Section E. In order to
6 calculate printing costs, the market research volumes are disaggregated into:
7 8.5x11 and 8.5x14 black and white impressions, 11x17 black and white impressions,
8 and 8.5x11 and 8.5x14 spot color impressions. To calculate insertion and
9 transportation costs, the volumes are segmented into letter-sized and flat-sized
10 documents.

11 The required number of digital printers is calculated by using the different
12 digital printer throughputs, which vary according to color, paper size, and whether a
13 document is simplex (single-sided) or duplex (double-sided). The same methodology
14 is used for inserters, based on only one differentiating factor -- the shape of the
15 document. The total number of machines required in each year is evenly spread
16 across print sites. Costs are estimated by calculating hardware costs for the
17 machines required to produce Mailing Online volumes, personnel required to operate
18 those machines, facility costs, consumables, and transportation of the finished
19 product to the nearest mail processing facility.

20 Because the Postal Service will contract for Mailing Online print services with
21 existing print providers, it is reasonable to expect that a portion of Mailing Online
22 volumes may be produced during downtime, or "slack" time, of a print provider's
23 existing operation. However, the methodology used to estimate the provider's cost
24 conservatively assumes that print services are provided through the use of dedicated
25 Mailing Online production processes.

1 More specifically, the methodology presented in this testimony assumes digital
2 printers and inserters are dedicated to only Mailing Online print production. In reality,
3 a typical print site has digital printers and inserters that work on many different jobs
4 and products as opposed to just one specific product, such as Mailing Online. By
5 using the maximum number of machines a print site must have in order to produce
6 only Mailing Online volume, costs are estimated conservatively high.

7 The cost model presented in this testimony projects over a five-year period,
8 beginning in 1999 and ending in 2003. The Postal Service is proposing that the
9 Mailing Online experiment spans the first two years, 1999 and 2000.²

10

11 B. DEVELOPMENT OF POSTAL SERVICE INFORMATION SYSTEMS COSTS

12

13 This section of my testimony details the development of first-hand Mailing
14 Online information systems costs. These costs are included in those presented in
15 Table 1.

16 The information systems costs relied upon herein were prepared by witness
17 Stirewalt. See LR-1/MC98-1. I worked closely with postal personnel to assure that
18 costs appropriate for use in my testimony were developed. The costs reflect the
19 process of a customer sending an electronic document to the central processing
20 center via the internet, batching the document with other Mailing Online documents,
21 storing a back-up of the document, and then electronically sending a batch via a T1

² Assuming implementation of experimental rates in January 1999, the experimental period would run during the calendar years 1999 and 2000. Because the volume projections are based on a five-year period and full national rollout is achieved after three years, the model examines costs over the full period of five years.

1 line to one of many print sites geographically spread across the country.

2 The hardware and software configuration is based on the configuration of the
3 Postal Service's central processing center in San Mateo, CA, which is the computer
4 operations center for Mailing Online document management, mail merge, and on-line
5 payment. A second central processing site will serve as a backup and will scale into
6 the second full processing site for load balancing and disaster recovery purposes.

7 The costs also include a testing and staging environment that is located in San
8 Mateo. All of these facilities are Postal Service facilities. One T1 line for document
9 transmission will connect San Mateo to each print site around the country, where a
10 Postal Service router and FTP server will be installed and maintained. Customer
11 support and systems personnel costs in San Mateo are Postal Service expenses,
12 since it is a postal facility. Similarly, all equipment installation and server
13 maintenance costs are direct Postal Service expenses.

14 The information systems costs include both fixed and variable components.
15 The fixed component is allocated based on piece volume over the first two years,
16 since those years define the experiment. The variable component is allocated based
17 upon impression volume in each year.

18
19 C. DEVELOPMENT OF CONTRACTUAL PRINTER COSTS

20
21 This section of my testimony details the portion of Mailing Online printing costs
22 that the Postal Service will incur by contracting with printing companies.

1 1) DEVELOPMENT OF HARDWARE COSTS

2
3 As discussed in Section III(A), for the purpose of estimating printing costs
4 conservatively high, all Mailing Online volume is assumed to be produced with
5 dedicated hardware. The required hardware is thus primarily a function of Mailing
6 Online volume and the number of print sites. Because the volume and number of
7 print sites grow over time, so will the hardware requirements and associated costs.

8 The hardware required to provide printing services for Mailing Online includes
9 digital printers, finishers, and inserters. This testimony assumes use of Xerox
10 DocuTech digital printers and in-line Signature Booklet Makers, since these
11 machines are capable of providing all of the printing and potential finishing options
12 currently offered with the Mailing Online service.³ Each printer requires one finisher.
13 The Pitney Bowes 8 and 9 Series inserters are used as examples in this model to
14 permit estimation of insertion costs.

15 The number of printers, and, in turn, finishers and inserters needed to provide
16 the Mailing Online service is a function of expected Mailing Online volumes. The
17 Mailing Online market research provides total annual volume figures and no detail
18 concerning its geographic dispersion.⁴ Therefore, annual volumes are assumed to be
19 evenly distributed across print sites. As discussed in witness Garvey's testimony in
20 Section 2, Mailing Online's full rollout involves a total of 25 print sites in 2001.

21 The number of digital printers required to produce the Mailing Online volumes
22 also is a function of printer throughputs. The maximum throughputs are adjusted by

³ See Witness Garvey's testimony (USPS-T-1) for more detail on available finishing options.

⁴ See LR-2/MC98-1, Section E.

1 a factor of 68 percent to account for down-time, including time spent loading paper,
2 clearing jams, and other activities.⁵ The resulting productivity accordingly represents
3 a realistic operational environment.

4 The total number of printers needed to support national rollout in 2001 is
5 calculated using the adjusted productivities and the annual volume. Based on the
6 assumption of annual Mailing Online volume being distributed evenly across print
7 sites, it follows that each print site in a given year will require the same equipment
8 configuration. Thus, the total number of printers and finishers required in 2001 is
9 spread evenly across the twenty-five sites. This equipment configuration is held
10 constant during the ramp-up period (1999 and 2000) prior to national rollout. The
11 equipment configuration, along with the 1999 and 2000 Mailing Online volumes are
12 then used to calculate the number of printing sites that will be contracted for in 1999
13 and 2000.

14 The number of print sites and the equipment configuration are derived using
15 simple division, leading to non-integer values. Because there cannot exist a fraction
16 of a print site, printer, or inserter, the results are rounded-up to integer values.
17 Rounding both the number of print sites, printers, and inserters in this manner
18 creates a peak volume contingency buffer for all of the digital printer types and the
19 inserters. For example, the 1999 peak contingency buffer for printing 8.5x11/14
20 paper on the DocuTech 6180 is 27 percent, and is a composite 75 percent for letter

⁵ See LR-3/MC98-1, Tab A. The median of the range is used.

1 and flat inserters combined.⁶ These buffers allow for the unpredictability of cycle
2 time and any volumes realized beyond the market research results.

3 The final, annual number of digital printers and inserters required for a
4 particular year is multiplied by the annual lease costs, based on a five-year lease
5 plan for the digital printers and inserters. For cost calculation and volume
6 contingency purposes, the methodology discussed above provides a unique printer
7 for each of the different print streams. Print streams are defined by the combination
8 of paper size, of which there are two (8.5x11/14 and 11x17), and color, of which
9 there are also two (black and white, and spot). This treatment is necessary due to
10 the different throughput rates that exist for the different combinations, and is an
11 additional reason why my cost results are conservatively high. Finally, a full-service,
12 volume-based maintenance plan is included for both the digital printers and the
13 inserters. The maintenance costs are based on the standard service provided by the
14 equipment manufacturer.

15 Since specific finishing demand is unknown, one in-line finisher per digital
16 printer is assumed. This conservative configuration would accommodate saddle
17 stitching or tape binding for each document.

⁶ The contingency buffers are calculated for a particular machine by subtracting the precise number of machines required, expressed as a non-integer value, from the final required number, expressed as an integer. The result of this calculation is the extra number, or fraction thereof, of machines that are present in the model due to rounding. Next, the annual throughput is multiplied by the extra machines per year for each machine type, which results in an annual excess volume capacity figure for each machine type. The percent contingency is calculated by dividing the excess-capacity figure by the actual volume figure provided by the market research.

1 2) DEVELOPMENT OF PERSONNEL COSTS

2
3 This testimony allocates one operator to each digital printer and inserter
4 configuration for each shift. Digital printer operator wages are taken from the
5 National Association of Quick Printers, *1997/1998 Wage & Salary Study* (NAQP
6 Study), and benefits are calculated as 30 percent of an operator's annual salary.⁷
7 Since the reported wages are from 1997, they are inflated by a compounded rate for
8 a total of two years to calculate 1999-equivalent wages, three years to calculate
9 2000-equivalent wages, etc. Digital printer operator wages are also assumed for
10 inserter personnel. One additional inserter operator is allocated to each shift per print
11 site as the "sweeper," or the person who carries output from the digital printers to the
12 inserters. Further, one contingency digital printer operator is allocated to each site
13 per day in the event that a regularly scheduled operator is ill or on vacation.

14 One copier department supervisor, at wages also taken from the NAQP Study,
15 is allocated to each print site per shift. Supervisor wages are inflated in the same
16 manner as the digital printer operator wages. Finally, a 42 percent general sales and
17 administration factor is applied to the total personnel cost to account for sales,
18 customer support, and administrative personnel.⁸

19
20 3) DEVELOPMENT OF FACILITY COSTS

21
22 In order to calculate facility costs, 606 square feet of print site space is

⁷ See LR-3/MC98-1, Tab D and LR-3/MC98-1, Tab A.

⁸ See LR-3/MC98-1, Tab A.

1 allocated to each printer configuration, 696 square feet is allocated to each 9 Series
2 inserter, and 493 square feet is allocated to each 8 Series inserter configuration.⁹
3 These specifications assure sufficient space to walk around a machine, load paper,
4 conduct maintenance, etc. Annual rent is calculated by applying a rent figure to the
5 total square feet required to house the needed hardware. Annual utility costs are
6 derived in the same manner. Finally, costs are allocated to the different digital printer
7 product types (8.5x11 and 8.5x14 black and white, 11x17 black and white, and
8 8.5x11 and 8.5x14 spot color) according to impression volume.

9 Much like digital printers, the inserters also incur facility costs. However,
10 instead of allocating the inserter facility costs to impressions, these costs are
11 allocated based on flat and letter volumes, which is what drives inserter costs.

12

13 4) DEVELOPMENT OF CONSUMABLES COSTS

14

15 The black and white digital printer uses the following consumables: toner,
16 developer, and fuser agent. The spot color digital printer uses the following
17 consumables: black toner, color toner, and fuser agent. Using the market research
18 results, the consumables costs are calculated on a per impression basis using the
19 manufacturer's standard price points.¹⁰ Consumable costs are allocated to the
20 different product types (8.5x11 and 8.5x14 black and white, 11x17 black and white,
21 and 8.5x11 and 8.5x14 spot color) according to impression volume.

22

⁹ See LR-3/MC98-1, Tab F.

¹⁰ See LR-2/MC98-1, Section E and LR-3/MC98-1, Tab C.

1 5) DEVELOPMENT OF TRANSPORTATION COSTS

2
3 Each print provider will incur daily ground transportation costs for transporting
4 the finished Mailing Online pieces from their print site to the nearest postal facility. To
5 estimate these costs, the market research results from National Analysts are
6 segmented by shape (letters and flats). The letter/flat distinctions are made based on
7 the weight of the document, which varies with paper size and the number of pages in
8 the document. Next, flats and letters are designated as either First-Class or Standard
9 Mail, using the market research results.¹¹ These calculations produce the following
10 four volume categories: First-Class letters, First-Class flats, Standard Mail letters,
11 and Standard Mail flats.

12 The number of containers required to move the mail on a daily per-site basis is
13 calculated using the market research results and average pieces per container
14 factors from the recent mail characteristics studies for both Standard Mail and First-
15 Class Mail.¹² Based on the average total cubic feet of those containers, it is
16 estimated that each facility would require no more than one truck, varying between
17 600 and 1,200 cubic feet. The average cost per mile for the truck is estimated using
18 FY97 intra-P&DC contracts with specified vehicle capacities of 600 to 1,200 cubic
19 feet.¹³ This range was selected to accommodate fluctuations in volume due to peak
20 periods, differences in volume per facility, and growth in volume over time.

¹¹ See LR-2/MC98-1, Section E.

¹² See LR-2/MC98-1, Section E and Docket No. R97-1, LR-H-105, Table 17; and LR-H-185, Table 3.

¹³ A P&DC is a processing and distribution center. P&DCs were previously termed sectional center facilities. Thus, the term intra-P&DC replaces the more commonplace term intra-SCF.

1 The result of this analysis is per-piece transportation costs for First-Class
2 letters, First-Class flats, Standard Mail letters, and Standard Mail flats. These costs
3 are added to the production cost of the finished Mailing Online document, governed
4 by class and shape.

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EXHIBIT A: Mailing Online Cost Analysis

Table 1: Mailing Online Impression Costs

Total Costs	Notes	1999	2000	2001	2002	2003	Total 1999 - 2000
Black & White 8.5x11 & 8.5x14							
(1) Hardware	From Table 12	\$2,628,000	\$4,467,600	\$6,570,000	\$8,760,000	\$10,950,000	\$7,095,600
(2) Maintenance	Ibid.						
(3) Personnel	From Table 11	\$4,214,900	\$7,380,290	\$11,178,969	\$14,929,136	\$18,958,926	\$11,595,190
(4) Facility costs	From Table 10	\$149,985	\$254,975	\$374,963	\$499,950	\$624,938	\$404,960
(5) Consumables	From Table 13	\$1,635,022	\$2,853,553	\$4,449,040	\$6,236,857	\$7,285,218	\$4,488,575
(6) Information Systems - Variable	From Table 15	\$710,294	\$926,255	\$1,217,946	\$1,138,895	\$1,138,234	\$1,636,549
(7) Information Systems - Fixed	From Table 14			\$0	\$0	\$0	
(8) TOTAL	Sum of (1) through (7)						
Black & White 11x17							
(9) Hardware	From Table 12	\$1,752,000	\$2,978,400	\$4,380,000	\$6,570,000	\$8,760,000	\$4,730,400
(10) Maintenance	Ibid.						
(11) Personnel	From Table 11	\$2,809,933	\$4,920,193	\$7,452,646	\$11,196,852	\$15,167,141	\$7,730,127
(12) Facility costs	From Table 10	\$99,990	\$169,983	\$249,975	\$374,963	\$499,950	\$269,973
(13) Consumables	From Table 13	\$458,999	\$801,077	\$1,248,978	\$1,750,871	\$2,045,178	\$1,260,077
(14) Information Systems - Variable	From Table 15	\$199,401	\$260,027	\$341,914	\$319,722	\$319,536	\$459,428
(15) Information Systems - Fixed	From Table 14			\$0	\$0	\$0	
(16) TOTAL	Sum of (9) through (15)						
Spot Color 8.5x11 & 8.5x14							
(17) Hardware	From Table 12	\$2,993,040	\$5,088,168	\$7,482,600	\$9,976,800	\$11,223,900	\$8,081,208
(18) Maintenance	Ibid.						
(19) Personnel	From Table 11	\$8,429,800	\$14,760,580	\$22,357,938	\$29,858,271	\$34,126,067	\$23,190,380
(20) Facility costs	From Table 10	\$299,970	\$509,949	\$749,925	\$999,900	\$1,124,888	\$809,919
(21) Consumables	From Table 13	\$3,461,889	\$6,041,925	\$9,420,105	\$13,205,512	\$15,425,242	\$9,503,814
(22) Information Systems - Variable	From Table 15	\$648,929	\$846,233	\$1,112,724	\$1,040,502	\$1,039,898	\$1,495,162
(23) Information Systems - Fixed	From Table 14			\$0	\$0	\$0	
(24) TOTAL	Sum of (17) through (23)						
(25) Total Costs	(8) + (16) + (24)						

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Table 1: Mailing Online Impression Costs

Total Costs	Notes	1999	2000	2001	2002	2003	Total 1999 - 2000
Black & White 8.5x11 & 8.5x14							
(1) Hardware	From Table 12	\$2,628,000	\$4,467,600	\$6,570,000	\$8,760,000	\$10,950,000	\$7,095,600
(2) Maintenance	Ibid.	\$3,564,029	\$6,220,187	\$9,698,037	\$13,595,128	\$15,880,349	\$9,784,215
(3) Personnel	From Table 11	\$4,214,900	\$7,380,290	\$11,178,969	\$14,929,136	\$18,958,926	\$11,595,190
(4) Facility costs	From Table 10	\$149,985	\$254,975	\$374,963	\$499,950	\$624,938	\$404,960
(5) Consumables	From Table 13	\$1,635,022	\$2,853,553	\$4,449,040	\$6,236,857	\$7,285,218	\$4,488,575
(6) Information Systems - Variable	From Table 15	\$710,294	\$926,255	\$1,217,946	\$1,138,895	\$1,138,234	\$1,636,549
(7) Information Systems - Fixed	From Table 14	\$379,097	\$661,626	\$0	\$0	\$0	\$1,040,723
(8) TOTAL	Sum of (1) through (7)	\$13,281,327	\$22,764,486	\$33,488,955	\$45,159,966	\$54,837,665	\$36,045,813
Black & White 11x17							
(9) Hardware	From Table 12	\$1,752,000	\$2,978,400	\$4,380,000	\$6,570,000	\$8,760,000	\$4,730,400
(10) Maintenance	Ibid.	\$1,000,529	\$1,746,192	\$2,722,528	\$3,816,557	\$4,458,087	\$2,746,720
(11) Personnel	From Table 11	\$2,809,933	\$4,920,193	\$7,452,646	\$11,196,852	\$15,167,141	\$7,730,127
(12) Facility costs	From Table 10	\$99,990	\$169,983	\$249,975	\$374,963	\$499,950	\$269,973
(13) Consumables	From Table 13	\$458,999	\$801,077	\$1,248,978	\$1,750,871	\$2,045,178	\$1,260,077
(14) Information Systems - Variable	From Table 15	\$199,401	\$260,027	\$341,914	\$319,722	\$319,536	\$459,428
(15) Information Systems - Fixed	From Table 14	\$106,424	\$185,738	\$0	\$0	\$0	\$292,162
(16) TOTAL	Sum of (9) through (15)	\$6,427,276	\$11,061,611	\$16,396,040	\$24,028,964	\$31,249,891	\$17,488,887
Spot Color 8.5x11 & 8.5x14							
(17) Hardware	From Table 12	\$2,993,040	\$5,088,168	\$7,482,600	\$9,976,800	\$11,223,900	\$8,081,208
(18) Maintenance	Ibid.	\$4,591,963	\$8,014,209	\$12,495,138	\$17,516,226	\$20,460,549	\$12,606,172
(19) Personnel	From Table 11	\$8,429,800	\$14,760,580	\$22,357,938	\$29,858,271	\$34,126,067	\$23,190,380
(20) Facility costs	From Table 10	\$299,970	\$509,949	\$749,925	\$999,900	\$1,124,888	\$809,919
(21) Consumables	From Table 13	\$3,461,889	\$6,041,925	\$9,420,105	\$13,205,512	\$15,425,242	\$9,503,814
(22) Information Systems - Variable	From Table 15	\$648,929	\$846,233	\$1,112,724	\$1,040,502	\$1,039,898	\$1,495,162
(23) Information Systems - Fixed	From Table 14	\$346,346	\$604,466	\$0	\$0	\$0	\$950,812
(24) TOTAL	Sum of (17) through (23)	\$20,771,937	\$35,865,530	\$53,618,430	\$72,597,211	\$83,400,543	\$56,637,467
(25) Total Costs	(8) + (16) + (24)	\$40,480,540	\$69,691,626	\$103,503,425	\$141,786,141	\$169,488,099	\$110,172,167

Table 1: Mailing Online Impression Costs

Total Costs	Notes	1999	2000	2001	2002	2003	Total 1999 - 2000
Black & White 8.5x11 & 8.5x14							
(1) Hardware	From Table 12	\$2,628,000	\$4,467,600	\$6,570,000	\$8,760,000	\$10,950,000	\$7,095,600
(2) Maintenance	Ibid.	\$3,564,029	\$6,220,187	\$9,898,037	\$13,595,128	\$15,880,349	\$9,784,215
(3) Personnel	From Table 11	\$4,214,900	\$7,380,290	\$11,178,969	\$14,929,136	\$18,958,926	\$11,595,190
(4) Facility costs	From Table 10	\$149,985	\$254,975	\$374,963	\$499,950	\$624,938	\$404,960
(5) Consumables	From Table 13	\$1,635,022	\$2,853,563	\$4,449,040	\$6,236,857	\$7,285,218	\$4,488,575
(6) Information Systems - Variable	From Table 15	\$710,294	\$926,255	\$1,217,946	\$1,138,895	\$1,138,234	\$1,636,549
(7) Information Systems - Fixed	From Table 14	\$379,429	\$662,206	\$0	\$0	\$0	\$1,041,635
(8) TOTAL	Sum of (1) through (7)	\$13,281,659	\$22,765,065	\$33,488,955	\$45,159,966	\$54,837,665	\$36,046,724
Black & White 11x17							
(9) Hardware	From Table 12	\$1,752,000	\$2,978,400	\$4,380,000	\$6,570,000	\$8,760,000	\$4,730,400
(10) Maintenance	Ibid.	\$1,000,529	\$1,746,192	\$2,722,528	\$3,816,557	\$4,458,087	\$2,746,720
(11) Personnel	From Table 11	\$2,809,933	\$4,920,193	\$7,452,646	\$11,196,852	\$15,167,141	\$7,730,127
(12) Facility costs	From Table 10	\$99,990	\$169,983	\$249,975	\$374,963	\$499,950	\$269,973
(13) Consumables	From Table 13	\$458,999	\$801,077	\$1,248,978	\$1,750,871	\$2,045,178	\$1,260,077
(14) Information Systems - Variable	From Table 15	\$199,401	\$260,027	\$341,914	\$319,722	\$319,536	\$459,428
(15) Information Systems - Fixed	From Table 14	\$106,517	\$185,901	\$0	\$0	\$0	\$292,418
(16) TOTAL	Sum of (9) through (15)	\$6,427,369	\$11,061,773	\$16,396,040	\$24,028,984	\$31,249,891	\$17,489,143
Spot Color 8.5x11 & 8.5x14							
(17) Hardware	From Table 12	\$2,993,040	\$5,088,168	\$7,482,600	\$9,976,800	\$11,223,900	\$8,081,208
(18) Maintenance	Ibid.	\$4,591,963	\$8,014,209	\$12,495,138	\$17,516,226	\$20,460,549	\$12,606,172
(19) Personnel	From Table 11	\$8,429,800	\$14,760,580	\$22,357,938	\$29,858,271	\$34,126,067	\$23,190,380
(20) Facility costs	From Table 10	\$299,970	\$509,949	\$749,925	\$999,900	\$1,124,888	\$809,919
(21) Consumables	From Table 13	\$3,461,889	\$6,041,925	\$9,420,105	\$13,205,512	\$15,425,242	\$9,503,814
(22) Information Systems - Variable	From Table 15	\$648,929	\$846,233	\$1,112,724	\$1,040,502	\$1,039,898	\$1,495,162
(23) Information Systems - Fixed	From Table 14	\$346,849	\$604,995	\$0	\$0	\$0	\$951,644
(24) TOTAL	Sum of (17) through (23)	\$20,772,240	\$36,866,059	\$53,618,430	\$72,597,211	\$83,400,543	\$56,638,300
(25) Total Costs	(8) + (16) + (24)	\$40,481,269	\$69,692,898	\$103,503,425	\$141,786,141	\$169,488,099	\$110,174,167

Unit Costs		1999	2000	2001	2002	2003	Average 1999 - 2000
(26) Black & White 8.5x11 & 8.5x14 Impressions	From Table 4	913,853,467	1,594,919,673	2,486,676,101	3,485,930,277	4,071,884,369	2,508,773,141
(27) Hardware	(1) divided by (26)	\$0.0029	\$0.0028	\$0.0026	\$0.0025	\$0.0027	\$0.0028
(28) Maintenance	(2) divided by (26)	\$0.0039	\$0.0039	\$0.0039	\$0.0039	\$0.0039	\$0.0039
(29) Personnel	(3) divided by (26)	\$0.0046	\$0.0046	\$0.0045	\$0.0043	\$0.0047	\$0.0046
(30) Facility costs	(4) divided by (26)	\$0.0002	\$0.0002	\$0.0002	\$0.0001	\$0.0002	\$0.0002
(31) Consumables	(5) divided by (26)	\$0.0018	\$0.0018	\$0.0018	\$0.0018	\$0.0018	\$0.0018
(32) Information Systems - Variable	(6) divided by (26)	\$0.0008	\$0.0006	\$0.0005	\$0.0003	\$0.0003	\$0.0007
(33) Information Systems - Fixed	(7) divided by (26)	\$0.0004	\$0.0004	\$0.0000	\$0.0000	\$0.0000	\$0.0004
(34) TOTAL	Sum of (27) through (33)	\$0.0145	\$0.0143	\$0.0135	\$0.0130	\$0.0135	\$0.0144
(35) Black & White 11x17 Impressions	From Table 4	256,545,865	447,741,418	698,083,986	978,604,372	1,143,099,124	704,287,283
(36) Hardware	(9) divided by (35)	\$0.0068	\$0.0067	\$0.0063	\$0.0067	\$0.0077	\$0.0067
(37) Maintenance	(10) divided by (35)	\$0.0039	\$0.0039	\$0.0039	\$0.0039	\$0.0039	\$0.0039
(38) Personnel	(11) divided by (35)	\$0.0110	\$0.0110	\$0.0107	\$0.0114	\$0.0133	\$0.0110
(39) Facility costs	(12) divided by (35)	\$0.0004	\$0.0004	\$0.0004	\$0.0004	\$0.0004	\$0.0004
(40) Consumables	(13) divided by (35)	\$0.0018	\$0.0018	\$0.0018	\$0.0018	\$0.0018	\$0.0018
(41) Information Systems - Variable	(14) divided by (35)	\$0.0008	\$0.0006	\$0.0005	\$0.0003	\$0.0003	\$0.0007
(42) Information Systems - Fixed	(15) divided by (35)	\$0.0004	\$0.0004	\$0.0000	\$0.0000	\$0.0000	\$0.0004
(43) TOTAL	Sum of (36) through (42)	\$0.0251	\$0.0247	\$0.0235	\$0.0246	\$0.0273	\$0.0248
(44) Spot Color 8.5x11 & 8.5x14 Impressions	From Table 4	834,902,418	1,457,128,894	2,271,843,315	3,184,768,371	3,720,099,806	2,292,031,313
(45) Hardware	(17) divided by (44)	\$0.0036	\$0.0035	\$0.0033	\$0.0031	\$0.0030	\$0.0035
(46) Maintenance	(18) divided by (44)	\$0.0055	\$0.0055	\$0.0055	\$0.0055	\$0.0055	\$0.0055
(47) Personnel	(19) divided by (44)	\$0.0101	\$0.0101	\$0.0098	\$0.0094	\$0.0092	\$0.0101
(48) Facility costs	(20) divided by (44)	\$0.0004	\$0.0003	\$0.0003	\$0.0003	\$0.0003	\$0.0004
(49) Consumables	(21) divided by (44)	\$0.0041	\$0.0041	\$0.0041	\$0.0041	\$0.0041	\$0.0041
(50) Information Systems - Variable	(22) divided by (44)	\$0.0008	\$0.0006	\$0.0005	\$0.0003	\$0.0003	\$0.0007
(51) Information Systems - Fixed	(23) divided by (44)	\$0.0004	\$0.0004	\$0.0000	\$0.0000	\$0.0000	\$0.0004
(52) TOTAL	Sum of (45) through (51)	\$0.0249	\$0.0246	\$0.0236	\$0.0228	\$0.0224	\$0.0247

Revised August 10, 1998

Average 1999 - 2000

Unit Costs		1999	2000	2001	2002	2003	
(26) Black & White 8.5x11 & 8.5x14 Impressions	From Table 4	913,853,467	1,594,919,673	2,486,676,101	3,485,930,277	4,071,884,369	2,508,773,141
(27) Hardware	(1) divided by (26)	\$0.0029	\$0.0028	\$0.0026	\$0.0025	\$0.0027	\$0.0028
(28) Maintenance	(2) divided by (26)						
(29) Personnel	(3) divided by (26)	\$0.0046	\$0.0046	\$0.0045	\$0.0043	\$0.0047	\$0.0046
(30) Facility costs	(4) divided by (26)	\$0.0002	\$0.0002	\$0.0002	\$0.0001	\$0.0002	\$0.0002
(31) Consumables	(5) divided by (26)	\$0.0018	\$0.0018	\$0.0018	\$0.0018	\$0.0018	\$0.0018
(32) Information Systems - Variable	(6) divided by (26)	\$0.0008	\$0.0006	\$0.0005	\$0.0003	\$0.0003	\$0.0007
(33) Information Systems - Fixed	(7) divided by (26)	\$0.0004	\$0.0004	\$0.0000	\$0.0000	\$0.0000	\$0.0004
(34) TOTAL	Sum of (27) through (33)						
(35) Black & White 11x17 Impressions	From Table 4	256,545,865	447,741,418	698,083,986	978,604,372	1,143,099,124	704,287,283
(36) Hardware	(9) divided by (35)	\$0.0068	\$0.0067	\$0.0063	\$0.0067	\$0.0077	\$0.0067
(37) Maintenance	(10) divided by (35)						
(38) Personnel	(11) divided by (35)	\$0.0110	\$0.0110	\$0.0107	\$0.0114	\$0.0133	\$0.0110
(39) Facility costs	(12) divided by (35)	\$0.0004	\$0.0004	\$0.0004	\$0.0004	\$0.0004	\$0.0004
(40) Consumables	(13) divided by (35)	\$0.0018	\$0.0018	\$0.0018	\$0.0018	\$0.0018	\$0.0018
(41) Information Systems - Variable	(14) divided by (35)	\$0.0008	\$0.0006	\$0.0005	\$0.0003	\$0.0003	\$0.0007
(42) Information Systems - Fixed	(15) divided by (35)	\$0.0004	\$0.0004	\$0.0000	\$0.0000	\$0.0000	\$0.0004
(43) TOTAL	Sum of (36) through (42)						
(44) Spot Color 8.5x11 & 8.5x14 Impressions	From Table 4	834,902,418	1,457,128,894	2,271,843,315	3,184,768,371	3,720,099,806	2,292,031,313
(45) Hardware	(17) divided by (44)	\$0.0036	\$0.0035	\$0.0033	\$0.0031	\$0.0030	\$0.0035
(46) Maintenance	(18) divided by (44)						
(47) Personnel	(19) divided by (44)	\$0.0101	\$0.0101	\$0.0098	\$0.0094	\$0.0092	\$0.0101
(48) Facility costs	(20) divided by (44)	\$0.0004	\$0.0003	\$0.0003	\$0.0003	\$0.0003	\$0.0004
(49) Consumables	(21) divided by (44)	\$0.0041	\$0.0041	\$0.0041	\$0.0041	\$0.0041	\$0.0041
(50) Information Systems - Variable	(22) divided by (44)	\$0.0008	\$0.0006	\$0.0005	\$0.0003	\$0.0003	\$0.0007
(51) Information Systems - Fixed	(23) divided by (44)	\$0.0004	\$0.0004	\$0.0000	\$0.0000	\$0.0000	\$0.0004
(52) TOTAL	Sum of (45) through (51)						

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Table 2: Mailing Online Inserter Costs

Total Costs	Notes	1999	2000	2001	2002	2003	Total 1999 - 2000
Letter-Sized Documents							
(1) Hardware	From Table 12	\$822,960	\$1,399,032	\$2,057,400	\$4,114,800	\$4,114,800	\$2,221,992
(2) Maintenance	Ibid.	\$390,000	\$663,000	\$975,000	\$1,950,000	\$1,950,000	\$1,053,000
(3) Personnel	From Table 11	\$1,791,842	\$3,137,515	\$4,752,412	\$9,029,719	\$8,854,331	\$4,929,356
(4) Facility costs	From Table 10	\$57,420	\$97,614	\$143,550	\$287,100	\$287,100	\$155,034
(5) TOTAL	Sum of (1) through (4)	\$3,062,222	\$5,297,161	\$7,928,362	\$15,381,619	\$15,206,231	\$8,359,382
Flat-Sized Documents							
(6) Hardware	From Table 12	\$1,266,000	\$2,152,200	\$3,165,000	\$3,165,000	\$4,747,500	\$3,418,200
(7) Maintenance	Ibid.	\$600,000	\$1,020,000	\$1,500,000	\$1,500,000	\$2,250,000	\$1,620,000
(8) Personnel	From Table 11	\$3,583,683	\$6,275,029	\$9,504,824	\$9,029,719	\$13,281,496	\$9,858,712
(9) Facility costs	From Table 10	\$81,345	\$138,287	\$203,363	\$203,363	\$305,044	\$219,632
(10) TOTAL	Sum of (6) through (9)	\$5,531,028	\$9,585,516	\$14,373,186	\$13,898,082	\$20,584,040	\$15,116,544
Unit Costs							
		1999	2000	2001	2002	2003	Average 1999 - 2000
(11) Letter-Sized Documents	From Table 8	250,313,062	436,863,503	681,123,977	954,829,097	1,115,327,435	687,176,564
(12) Hardware	(1) divided by (11)	\$0.0033	\$0.0032	\$0.0030	\$0.0043	\$0.0037	\$0.0032
(13) Maintenance	(2) divided by (11)	\$0.0016	\$0.0015	\$0.0014	\$0.0020	\$0.0017	\$0.0015
(14) Personnel	(3) divided by (11)	\$0.0072	\$0.0072	\$0.0070	\$0.0095	\$0.0079	\$0.0072
(15) Facility costs	(4) divided by (11)	\$0.0002	\$0.0002	\$0.0002	\$0.0003	\$0.0003	\$0.0002
(16) TOTAL	Sum of (12) through (15)	\$0.0122	\$0.0121	\$0.0116	\$0.0161	\$0.0136	\$0.0122
(17) Flat-Sized Documents	From Table 8	45,351,961	79,151,349	123,406,696	172,996,852	202,076,095	124,503,309
(18) Hardware	(6) divided by (17)	\$0.0279	\$0.0272	\$0.0256	\$0.0183	\$0.0235	\$0.0275
(19) Maintenance	(7) divided by (17)	\$0.0132	\$0.0129	\$0.0122	\$0.0087	\$0.0111	\$0.0130
(20) Personnel	(8) divided by (17)	\$0.0790	\$0.0793	\$0.0770	\$0.0522	\$0.0657	\$0.0792
(21) Facility costs	(9) divided by (17)	\$0.0018	\$0.0017	\$0.0016	\$0.0012	\$0.0015	\$0.0018
(22) TOTAL	Sum of (18) through (21)	\$0.1220	\$0.1211	\$0.1165	\$0.0803	\$0.1019	\$0.1214

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Table 3: Transportation Costs

Volume Breakdown into Flats and Letters		Notes	1999	2000	2001	2002	2003	Total 1999 - 2000
8.5x11 pieces								
(1)	% of total that is 8.5x11 w/ 1-2 pages	Table 4, row (11) * row (29)	53.50%	53.50%	53.50%	53.50%	53.50%	
(2)	% of total that is 1C, 8.5x11, 1-2 pages	(1) * Table 4, row (7)	16.60%	16.60%	16.60%	16.60%	16.60%	
(3) Letter	1C Pieces, 8.5x11, 1-2 pages	(2) * Table 4, row (1)	49,079,195	85,856,373	133,548,830	187,214,535	218,683,644	134,735,568
(4)	% of total that is Std, 8.5x11, 1-2 pages	(1) * Table 4, row (9)	36.90%	36.90%	36.90%	36.90%	36.90%	
(5) Letter	Std Pieces, 8.5x11, 1-2 pages	(4) * Table 4, row (1)	109,087,724	190,387,369	296,837,344	416,119,447	486,065,451	299,475,093
8.5x11 w/ 3-4 pages								
(6)	% of total that is 8.5x11 w/ 3-4 pages	Table 4, row (13) * row (29)	8.42%	8.42%	8.42%	8.42%	8.42%	
(7)	% of total that is 1C, 8.5x11, 3-4 pages	(6) * Table 4, row (7)	2.61%	2.61%	2.61%	2.61%	2.61%	
(8) Letter	1C Pieces, 8.5x11, 3-4 pages	(7) * Table 4, row (1)	7,722,881	13,478,152	21,014,098	29,458,473	34,410,183	21,200,833
(9)	% of total that is Std, 8.5x11, 3-4 pages	(6) * Table 4, row (9)	5.81%	5.81%	5.81%	5.81%	5.81%	
(10) Letter	Std Pieces, 8.5x11, 3-4 pages	(9) * Table 4, row (1)	17,165,109	29,957,723	46,707,779	65,476,987	78,483,090	47,122,832
8.5x11 w/ 5-6 pages								
(11)	% of total that is 8.5x11 w/ 5-6 pages	Table 4, row (15) * row (29)	7.49%	7.49%	7.49%	7.49%	7.49%	
(12)	% of total that is 1C, 8.5x11, 5-6 pages	(11) * Table 4, row (7)	2.32%	2.32%	2.32%	2.32%	2.32%	
(13) Letter	1C Pieces, 8.5x11, 5-6 pages	(12) * Table 4, row (1)	8,868,626	11,987,597	18,690,140	28,200,648	30,604,745	18,856,224
(14)	% of total that is Std, 8.5x11, 5-6 pages	(11) * Table 4, row (9)	5.16%	5.16%	5.16%	5.16%	5.16%	
(15) Letter	Std Pieces, 8.5x11, 5-6 pages	(14) * Table 4, row (1)	15,266,812	26,644,686	41,542,345	58,235,858	68,024,792	41,911,497
8.5x11 w/ 7-10 pages								
(16)	% of total that is 8.5x11 w/ 7-10 pages	Table 4, row (17) * row (29)	2.52%	2.52%	2.52%	2.52%	2.52%	
(17)	% of total that is 1C, 8.5x11, 7-10 pages	(16) * Table 4, row (7)	0.78%	0.78%	0.78%	0.78%	0.78%	
(18) Flat	1C Pieces, 8.5x11, 7-10 pages	(17) * Table 4, row (1)	2,308,843	4,029,551	6,282,568	8,807,172	10,287,580	6,338,393
(19)	% of total that is Std, 8.5x11, 7-10 pages	(16) * Table 4, row (9)	1.74%	1.74%	1.74%	1.74%	1.74%	
(20) Flat	Std Pieces, 8.5x11, 7-10 pages	(19) * Table 4, row (1)	5,131,837	8,956,433	13,964,181	19,675,594	22,866,079	14,088,269
8.5x11 w/ 11-15 pages								
(21)	% of total that is 8.5x11 w/ 11-15 pages	Table 4, row (19) * row (29)	1.40%	1.40%	1.40%	1.40%	1.40%	
(22)	% of total that is 1C, 8.5x11, 11-15 pages	(21) * Table 4, row (7)	0.44%	0.44%	0.44%	0.44%	0.44%	
(23) Flat	1C Pieces, 8.5x11, 11-15 pages	(22) * Table 4, row (1)	1,288,320	2,248,484	3,505,632	4,914,347	5,740,405	3,536,784
(24)	% of total that is Std, 8.5x11, 11-15 pages	(21) * Table 4, row (9)	0.97%	0.97%	0.97%	0.97%	0.97%	
(25) Flat	Std Pieces, 8.5x11, 11-15 pages	(24) * Table 4, row (1)	2,863,533	4,997,833	7,791,928	10,923,059	12,759,128	7,861,166
8.5x11 w/ >15 pages								
(26)	% of total that is 8.5x11 w/ >15 pages	Table 4, row (21) * row (29)	5.56%	5.56%	5.56%	5.56%	5.56%	
(27)	% of total that is 1C, 8.5x11, >15 pages	(26) * Table 4, row (7)	1.73%	1.73%	1.73%	1.73%	1.73%	
(28) Flat	1C Pieces, 8.5x11, >15 pages	(27) * Table 4, row (1)	5,102,615	8,905,433	13,884,667	19,464,127	22,735,875	14,008,048
(29)	% of total that is Std, 8.5x11, >15 pages	(26) * Table 4, row (9)	3.84%	3.84%	3.84%	3.84%	3.84%	
(30) Flat	Std Pieces, 8.5x11, >15 pages	(29) * Table 4, row (1)	11,341,520	19,793,997	30,861,278	43,262,877	50,534,751	31,135,517
8.5x14 pieces								
(31)	% of total that is 8.5x14 w/ 1-2 pages	Table 4, row (11) * row (30)	5.97%	5.97%	5.97%	5.97%	5.97%	
(32)	% of total that is 1C, 8.5x14, 1-2 pages	(31) * Table 4, row (7)	1.85%	1.85%	1.85%	1.85%	1.85%	
(33) Letter	1C Pieces, 8.5x14, 1-2 pages	(32) * Table 4, row (1)	5,480,894	9,565,631	14,913,987	20,907,086	24,421,383	15,046,525
(34)	% of total that is Std, 8.5x14, 1-2 pages	(31) * Table 4, row (9)	4.12%	4.12%	4.12%	4.12%	4.12%	
(35) Letter	Std Pieces, 8.5x14, 1-2 pages	(34) * Table 4, row (1)	12,182,315	21,281,411	33,148,157	46,469,924	54,281,108	33,443,726
8.5x14 w/ 3-4 pages								
(36)	% of total that is 8.5x14 w/ 3-4 pages	Table 4, row (13) * row (30)	0.94%	0.94%	0.94%	0.94%	0.94%	
(37)	% of total that is 1C, 8.5x14, 3-4 pages	(36) * Table 4, row (7)	0.29%	0.29%	0.29%	0.29%	0.29%	
(38) Letter	1C Pieces, 8.5x14, 3-4 pages	(37) * Table 4, row (1)	862,426	1,505,168	2,348,739	3,289,760	3,842,739	2,367,592
(39)	% of total that is Std, 8.5x14, 3-4 pages	(36) * Table 4, row (9)	0.65%	0.65%	0.65%	0.65%	0.65%	
(40) Letter	Std Pieces, 8.5x14, 3-4 pages	(39) * Table 4, row (1)	1,916,905	3,345,513	5,216,067	7,312,109	8,541,210	5,262,418

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(41)	% of total that is 8.5x14 w/ 5-6 pages	Table 4, row (15) * row (30)	0.84%	0.84%	0.84%	0.84%	0.84%	
(42)	% of total that is 1C, 8.5x14, 5-6 pages	(41) * Table 4, row (7)	0.26%	0.26%	0.26%	0.26%	0.26%	
(43) Flat	1C Pieces, 8.5x14, 5-6 pages	(42) * Table 4, row (1)	767,050	1,338,709	2,087,212	2,925,944	3,417,769	2,105,759
(44)	% of total that is Std, 8.5x14, 5-6 pages	(41) * Table 4, row (8)	0.58%	0.58%	0.58%	0.58%	0.58%	
(45) Flat	Std Pieces, 8.5x14, 5-6 pages	(44) * Table 4, row (1)	1,704,913	2,975,532	4,639,220	6,503,459	7,596,633	4,680,445
(46)	% of total that is 8.5x14 w/ 7-10 pages	Table 4, row (17) * row (30)	0.28%	0.28%	0.28%	0.28%	0.28%	
(47)	% of total that is 1C, 8.5x14, 7-10 pages	(46) * Table 4, row (7)	0.09%	0.09%	0.09%	0.09%	0.09%	
(48) Flat	1C Pieces, 8.5x14, 7-10 pages	(47) * Table 4, row (1)	257,839	449,988	701,802	983,536	1,148,860	707,837
(49)	% of total that is Std, 8.5x14, 7-10 pages	(46) * Table 4, row (8)	0.19%	0.19%	0.19%	0.19%	0.19%	
(50) Flat	Std Pieces, 8.5x14, 7-10 pages	(49) * Table 4, row (1)	573,095	1,000,205	1,559,443	2,186,094	2,553,558	1,573,300
(51)	% of total that is 8.5x14 w/ 11-15 pages	Table 4, row (19) * row (30)	0.16%	0.16%	0.16%	0.16%	0.16%	
(52)	% of total that is 1C, 8.5x14, 11-15 pages	(51) * Table 4, row (7)	0.05%	0.05%	0.05%	0.05%	0.05%	
(53) Flat	1C Pieces, 8.5x14, 11-15 pages	(52) * Table 4, row (1)	143,872	251,096	391,490	548,807	641,057	394,969
(54)	% of total that is Std, 8.5x14, 11-15 pages	(51) * Table 4, row (8)	0.11%	0.11%	0.11%	0.11%	0.11%	
(55) Flat	Std Pieces, 8.5x14, 11-15 pages	(54) * Table 4, row (1)	319,784	558,108	870,159	1,219,827	1,424,869	877,892
(56)	% of total that is 8.5x14 w/ >15 pages	Table 4, row (21) * row (30)	0.62%	0.62%	0.62%	0.62%	0.62%	
(57)	% of total that is 1C, 8.5x14, >15 pages	(56) * Table 4, row (7)	0.19%	0.19%	0.19%	0.19%	0.19%	
(58) Flat	1C Pieces, 8.5x14, >15 pages	(57) * Table 4, row (1)	569,832	994,510	1,550,563	2,173,646	2,539,017	1,564,342
(59)	% of total that is Std, 8.5x14, >15 pages	(56) * Table 4, row (8)	0.43%	0.43%	0.43%	0.43%	0.43%	
(60) Flat	Std Pieces, 8.5x14, >15 pages	(59) * Table 4, row (1)	1,266,558	2,210,484	3,446,417	4,831,337	5,643,442	3,477,043
11x17 pieces								
(61)	% of total that is 11x17 w/ 1-2 pages	Table 4, row (11) * row (31)	8.35%	8.35%	8.35%	8.35%	8.35%	
(62)	% of total that is 1C, 11x17, 1-2 pages	(61) * Table 4, row (7)	2.59%	2.59%	2.59%	2.59%	2.59%	
(63) Letter	1C Pieces, 11x17, 1-2 pages	(62) * Table 4, row (1)	7,858,320	13,365,825	20,838,967	29,212,966	34,123,408	21,024,146
(64)	% of total that is Std, 11x17, 1-2 pages	(61) * Table 4, row (8)	5.76%	5.76%	5.76%	5.76%	5.76%	
(65) Letter	Std Pieces, 11x17, 1-2 pages	(64) * Table 4, row (1)	17,022,055	29,708,056	46,318,516	64,931,302	75,845,680	46,730,110
(66)	% of total that is 11x17 w/ 3-4 pages	Table 4, row (13) * row (31)	1.31%	1.31%	1.31%	1.31%	1.31%	
(67)	% of total that is 1C, 11x17, 3-4 pages	(66) * Table 4, row (7)	0.41%	0.41%	0.41%	0.41%	0.41%	
(68) Flat	1C Pieces, 11x17, 3-4 pages	(67) * Table 4, row (1)	1,205,048	2,103,132	3,279,041	4,586,702	5,369,367	3,308,179
(69)	% of total that is Std, 11x17, 3-4 pages	(66) * Table 4, row (8)	0.91%	0.91%	0.91%	0.91%	0.91%	
(70) Flat	Std Pieces, 11x17, 3-4 pages	(69) * Table 4, row (1)	2,678,445	4,674,805	7,288,284	10,217,033	11,934,426	7,353,049
(71)	% of total that is 11x17 w/ 5-6 pages	Table 4, row (15) * row (31)	1.17%	1.17%	1.17%	1.17%	1.17%	
(72)	% of total that is 1C, 11x17, 5-6 pages	(71) * Table 4, row (7)	0.36%	0.36%	0.36%	0.36%	0.36%	
(73) Flat	1C Pieces, 11x17, 5-6 pages	(72) * Table 4, row (1)	1,071,781	1,870,545	2,916,410	4,088,351	4,775,568	2,942,326
(74)	% of total that is Std, 11x17, 5-6 pages	(71) * Table 4, row (8)	0.81%	0.81%	0.81%	0.81%	0.81%	
(75) Flat	Std Pieces, 11x17, 5-6 pages	(74) * Table 4, row (1)	2,382,234	4,157,838	6,482,270	9,087,127	10,614,582	6,539,872
(76)	% of total that is 11x17 w/ 7-10 pages	Table 4, row (17) * row (31)	0.39%	0.39%	0.39%	0.39%	0.39%	
(77)	% of total that is 1C, 11x17, 7-10 pages	(76) * Table 4, row (7)	0.12%	0.12%	0.12%	0.12%	0.12%	
(78) Flat	1C Pieces, 11x17, 7-10 pages	(77) * Table 4, row (1)	360,272	628,771	980,332	1,374,272	1,605,275	989,043
(79)	% of total that is Std, 11x17, 7-10 pages	(76) * Table 4, row (8)	0.27%	0.27%	0.27%	0.27%	0.27%	
(80) Flat	Std Pieces, 11x17, 7-10 pages	(79) * Table 4, row (1)	800,772	1,397,562	2,176,972	3,054,577	3,568,024	2,198,334
(81)	% of total that is 11x17 w/ 11-15 pages	Table 4, row (19) * row (31)	0.22%	0.22%	0.22%	0.22%	0.22%	
(82)	% of total that is 1C, 11x17, 11-15 pages	(81) * Table 4, row (7)	0.07%	0.07%	0.07%	0.07%	0.07%	
(83) Flat	1C Pieces, 11x17, 11-15 pages	(82) * Table 4, row (1)	201,029	350,850	547,019	766,835	895,733	551,880

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(84)	% of total that is Std, 11x17, 11-15 pages	(81) * Table 4, row (9)	0.15%	0.15%	0.15%	0.15%	0.15%	
(85)	Fiat Std, 11x17, 11-15 pages	(84) * Table 4, row (1)	446,826	779,831	1,215,852	1,704,435	1,990,935	1,226,657
(86)	% of total that is 11x17 w/ >15 pages	Table 4, row (21) * row (31)	0.87%	0.87%	0.87%	0.87%	0.87%	
(87)	% of total that is 1C, 11x17, >15 pages	(86) * Table 4, row (7)	0.27%	0.27%	0.27%	0.27%	0.27%	
(88)	Fiat 1C Pieces, 11x17, >15 pages	(87) * Table 4, row (1)	796,212	1,389,804	2,166,564	3,037,184	3,547,707	2,185,817
(89)	% of total that is Std, 11x17, >15 pages	(86) * Table 4, row (9)	0.60%	0.60%	0.60%	0.60%	0.60%	
(90)	Fiat Std, 11x17, >15 pages	(89) * Table 4, row (1)	1,789,731	3,088,856	4,815,596	6,750,710	7,885,445	4,858,388
		Sum of (3), (5), (8), (10), (13), (15), (18), (20), (23), (25), (28), (30), (33), (35), (38), (40), (43), (45), (48), (50), (53), (55), (58), (60), (63), (65), (68), (70), (73), (75), (78), (80), (83), (85), (88), and (90)						
(91)	GRAND TOTAL		295,665,022	516,014,851	804,530,673	1,127,825,948	1,317,403,529	811,679,874
	Total Annual Volume - All Sites							
(92)	First-Class Letters	Sum of (3), (8), (13), (33), (38), and (83)	77,672,143	135,558,745	211,352,770	296,283,469	346,086,103	213,230,888
(93)	First-Class Flats	Sum of (18), (23), (28), (43), (48), (53), (68), (73), (78), (83), and (88)	14,072,713	24,560,663	38,293,098	53,680,923	62,704,212	38,633,377
(94)	Standard Mail (A) Letters	Sum of (5), (10), (15), (35), (40), and (85)	172,840,919	301,304,758	469,771,207	658,545,628	769,241,332	473,945,676
(95)	Standard Mail (A) Flats	Sum of (20), (25), (30), (45), (50), (55), (60), (70), (75), (80), (85), and (90)	31,279,247	54,590,685	85,113,598	119,315,929	139,371,862	85,869,932
(96)	TOTAL	Sum of (92) through (95)	295,665,022	516,014,851	804,530,673	1,127,825,948	1,317,403,529	811,679,874
	Annual Volume per Site							
(97)	Number of sites in each year	From Table 9, row (20)	10	17	25	25	25	
(98)	First-Class Letters	(92) divided by (97)	7,767,214	7,974,044	8,454,111	11,851,339	13,843,444	15,741,258
(99)	First-Class Flats	(93) divided by (97)	1,407,271	1,444,745	1,531,724	2,147,237	2,508,168	2,852,016
(100)	Standard Mail (A) Letters	(94) divided by (97)	17,264,092	17,723,809	18,790,848	26,341,825	30,769,653	34,987,901
(101)	Standard Mail (A) Flats	(95) divided by (97)	3,127,925	3,211,217	3,404,544	4,772,837	5,574,875	6,339,141
(102)	TOTAL	Sum of (98) through (101)	29,566,502	30,363,815	32,181,227	46,113,038	52,696,141	59,920,317
	Daily Volume per Site							
(103)	First-Class Letters	(98) divided by 302	25,719	26,404	27,994	39,243	45,839	
(104)	First-Class Flats	(99) divided by 302	4,660	4,784	5,072	7,110	8,305	
(105)	Standard Mail (A) Letters	(100) divided by 302	57,166	58,688	62,221	87,225	101,886	
(106)	Standard Mail (A) Flats	(101) divided by 302	10,357	10,633	11,273	15,803	18,460	
(107)	TOTAL	Sum of (103) through (106)	97,902	100,509	106,560	149,381	174,491	
	Average Pieces per Container							
(108)	First-Class Letters	Docket No. R97-1, LR-H-185, Table 3	411	411	411	411	411	
(109)	First-Class Flats	Ibid., Table 8	541	541	541	541	541	
(110)	Standard Mail (A) Letters	Docket No. R97-1, LR-H-105, Table 17	187	187	187	187	187	
(111)	Standard Mail (A) Flats	Ibid.	142	142	142	142	142	
	Number of Containers Required per Site per Day							
(112)	First-Class Letters	(103) divided by (108)	63	64	68	96	112	
(113)	First-Class Flats	(104) divided by (109)	9	9	9	13	15	
(114)	Standard Mail (A) Letters	(105) divided by (110)	308	314	333	466	545	
(115)	Standard Mail (A) Flats	(106) divided by (111)	73	75	79	111	130	
(116)	TOTAL	Sum of (112) through (115)	460	462	490	686	802	
	Cubic Feet per Container							
(117)	Letter Tray	From Container Methods Handbook, Docket No. R97-1, LR-H-133, pp. 43 and 153.	0.75	0.75	0.75	0.75	0.75	
(118)	Flat Tub	Ibid.	1.50	1.50	1.50	1.50	1.50	
(119)	Letter Tray	Ibid.	0.75	0.75	0.75	0.75	0.75	
(120)	Sack	Ibid.	7.50	7.50	7.50	7.50	7.50	

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	Daily Cubic Feet per Site per Day						
(121)	First-Class Letters	(112) * (117)	47	48	51	72	84
(122)	First-Class Flats	(113) * (118)	13	13	14	20	23
(123)	Standard Mail (A) Letters	(114) * (119)	229	235	250	350	409
(124)	Standard Mail (A) Flats	(115) * (120)	547	562	595	835	975
(125)	Total Container Cubic Feet Per Site	Sum of (121) through (124)	836	858	910	1,275	1,490
Based on average cubic feet of containers, it is estimated that each facility will require no more than 1 truck per day.							
(126)	Total Number of Trucks Required per Site per Day		1	1	1	1	1
(127)	Average Cost per Mile (Based on 800 CUFT truck)	See LR-3/MC98-1, Tab G.	\$1.2211	\$1.2211	\$1.2211	\$1.2211	\$1.2211
(128)	Highway Transportation Inflation Factors	Docket No. R07-1, USPS-T-15, Exhibit 15A	1.0140	1.0140	1.0140	1.0140	1.0140
(129)	Inflated Cost per Mile	Previous year's cost per mile (row (127)) * inflation factor (row (128))	\$1.2555	\$1.2731	\$1.2909	\$1.3090	\$1.3273
(130)	Average Haul (Round-trip miles)	It is assumed that the average distance will be no more than 200 miles roundtrip.	200	200	200	200	200
(131)	Transportation Costs	(129) * (130)	\$251	\$255	\$258	\$262	\$265
Percentage of Total Cubic-Feet							
(132)	First-Class Letters	(121) divided by (125)	0.0562	0.0562	0.0562	0.0562	0.0562
(133)	First-Class Flats	(122) divided by (125)	0.0155	0.0155	0.0155	0.0155	0.0155
(134)	Standard Mail (A) Letters	(123) divided by (125)	0.2742	0.2742	0.2742	0.2742	0.2742
(135)	Standard Mail (A) Flats	(124) divided by (125)	0.6542	0.6542	0.6542	0.6542	0.6542
Total Transportation Costs per Site per Day							
(136)	First-Class Letters	(131) * (132)	\$14	\$14	\$15	\$15	\$15
(137)	First-Class Flats	(131) * (133)	\$4	\$4	\$4	\$4	\$4
(138)	Standard Mail (A) Letters	(131) * (134)	\$69	\$70	\$71	\$72	\$73
(139)	Standard Mail (A) Flats	(131) * (135)	\$164	\$167	\$169	\$171	\$174
	Total	Sum of (136) through (139)	\$251	\$255	\$258	\$262	\$265
Transportation Cost per Piece							
(140)	First-Class Letters	(136) divided by (103)	\$0.00055	\$0.00054	\$0.00052	\$0.00037	\$0.00033
(141)	First-Class Flats	(137) divided by (104)	\$0.00083	\$0.00082	\$0.00079	\$0.00057	\$0.00049
(142)	Standard Mail (A) Letters	(138) divided by (105)	\$0.00120	\$0.00119	\$0.00114	\$0.00082	\$0.00071
(143)	Standard Mail (A) Flats	(139) divided by (106)	\$0.01586	\$0.01567	\$0.01498	\$0.01084	\$0.00941
							Average 1999 - 2000
							\$0.00054
							\$0.00083
							\$0.00120
							\$0.01576

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Table 4: Mailing Online Volumes

All volume projections were developed by National Analysts.

	Notes	1999	2000	2001	2002	2003	Total 1999 - 2000
(1) Total Pieces	See LR-2/MC98-1, Section E, Table 12	295,665,025	516,014,856	804,530,681	1,127,825,960	1,317,403,543	811,679,882
(2) Black and White Pieces	Ibid.	164,153,222	286,491,448	446,675,434	626,168,973	731,422,447	460,644,670
(3) Spot Color Pieces	Ibid.	131,511,803	229,523,408	357,855,247	501,656,987	585,981,096	361,035,211
(4) Percentage of Black and White pieces	(2) divided by (1)	55.52%	55.52%	55.52%	55.52%	55.52%	55.52%
(5) Percentage of Spot Color pieces	(3) divided by (1)	44.48%	44.48%	44.48%	44.48%	44.48%	44.48%
(6) Next-Day Volume	See LR-2/MC98-1, Section E, Table 12	91,744,857	160,119,410	249,845,870	349,964,395	408,790,319	251,864,267
(7) Percentage of Next-Day Volume	(6) divided by (1)	31.03%	31.03%	31.03%	31.03%	31.03%	
(8) Standard Volume	See LR-2/MC98-1, Section E, Table 12	203,920,168	355,895,446	554,884,811	777,861,564	908,613,223	559,815,614
(9) Percentage of Standard Volume	(8) divided by (1)	68.97%	68.97%	68.97%	68.97%	68.97%	
(10) Pieces with 1-2 pages	See LR-2/MC98-1, Section E, Table 12	200,490,454	349,909,674	545,552,255	764,778,783	893,331,342	550,400,128
(11) Percentage with 1-2 pages	(10) divided by (1)	67.81%	67.81%	67.81%	67.81%	67.81%	67.81%
(12) Pieces with 3-4 pages	See LR-2/MC98-1, Section E, Table 12	31,547,458	55,058,785	85,843,424	120,339,030	140,566,958	86,606,243
(13) Percentage with 3-4 pages	(12) divided by (1)	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%
(14) Pieces with 5-6 pages	See LR-2/MC98-1, Section E, Table 12	28,058,611	48,969,810	76,349,962	107,030,684	125,021,596	77,028,421
(15) Percentage with 5-6 pages	(14) divided by (1)	9.49%	9.49%	9.49%	9.49%	9.49%	9.49%
(16) Pieces with 7-10 pages	See LR-2/MC98-1, Section E, Table 12	9,431,714	16,460,874	25,664,529	35,977,648	42,025,173	25,892,588
(17) Percentage with 7-10 pages	(16) divided by (1)	3.19%	3.19%	3.19%	3.19%	3.19%	3.19%
(18) Pieces with 11-15 pages	See LR-2/MC98-1, Section E, Table 12	5,262,837	9,185,064	14,320,646	20,075,302	23,449,783	14,447,902
(19) Percentage with 11-15 pages	(18) divided by (1)	1.78%	1.78%	1.78%	1.78%	1.78%	1.78%
(20) Pieces with greater than 15 pages	See LR-2/MC98-1, Section E, Table 12	20,844,384	36,379,047	56,719,413	79,511,730	92,876,950	57,223,432
(21) Percentage with greater than 15 pages	(20) divided by (1)	7.05%	7.05%	7.05%	7.05%	7.05%	7.05%
(22) Simplex Pieces (single-sided)	See LR-2/MC98-1, Section E, Table 12	142,067,045	247,945,138	386,576,992	541,920,374	633,012,402	390,012,183
(23) Duplex Pieces (double-sided)	Ibid.	153,597,981	268,069,718	417,953,689	585,905,586	684,391,140	421,667,699
(24) Percentage of Simplex Pieces	(22) divided by (1)	48.05%	48.05%	48.05%	48.05%	48.05%	48.05%
(25) Percentage of Duplex Pieces	(23) divided by (1)	51.95%	51.95%	51.95%	51.95%	51.95%	51.95%
(26) Pieces printed on 8.5x11 paper	See LR-2/MC98-1, Section E, Table 12	233,250,138	407,084,120	634,694,254	889,741,899	1,039,299,655	640,334,259
(27) Pieces printed on 8.5x14 paper	Ibid.	26,048,089	45,460,909	70,879,153	99,361,467	116,063,252	71,508,998
(28) Pieces printed on 11x17 paper	Ibid.	36,396,365	63,521,429	99,037,272	138,835,376	162,172,376	99,917,793
(29) Percentage of pieces printed on 8.5x11 paper	(26) divided by (1)	78.89%	78.89%	78.89%	78.89%	78.89%	78.89%
(30) Percentage of pieces printed on 8.5x14 paper	(27) divided by (1)	8.81%	8.81%	8.81%	8.81%	8.81%	8.81%
(31) Percentage of pieces printed on 11x17 paper	(28) divided by (1)	12.31%	12.31%	12.31%	12.31%	12.31%	12.31%
B&W breakdown of pages and impressions							
(32) Black and White pieces with 1-2 pages	(4) multiplied by (10)	111,312,300	194,269,851	302,890,812	424,605,180	495,977,561	305,582,151

Table 4: Mailing Online Volumes

All volume projections were developed by National Analysts.

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(1) Total Pieces		295,665,025	516,014,856	804,530,681	1,127,825,960	1,317,403,543	811,679,882
(2) Black and White Pieces	Ibid.	164,153,222	286,491,448	446,675,434	626,168,973	731,422,447	450,644,670
(3) Spot Color Pieces	Ibid.	131,511,803	229,523,408	357,855,247	501,656,987	585,981,096	361,035,211
(4) Percentage of Black and White pieces	(2) divided by (1)	55.52%	55.52%	55.52%	55.52%	55.52%	55.52%
(5) Percentage of Spot Color pieces	(3) divided by (1)	44.48%	44.48%	44.48%	44.48%	44.48%	44.48%
(6) Next-Day Volume		91,744,857	160,119,410	249,645,870	349,964,395	408,790,319	251,884,267
(7) Percentage of Next-Day Volume	(6) divided by (1)	31.03%	31.03%	31.03%	31.03%	31.03%	
(8) Standard Volume		203,920,168	355,895,446	554,884,811	777,861,564	908,613,223	559,815,614
(9) Percentage of Standard Volume	(8) divided by (1)	68.97%	68.97%	68.97%	68.97%	68.97%	
(10) Pieces with 1-2 pages		200,490,454	349,909,674	545,552,255	764,778,783	893,331,342	550,400,128
(11) Percentage with 1-2 pages	(10) divided by (1)	67.81%	67.81%	67.81%	67.81%	67.81%	67.81%
(12) Pieces with 3-4 pages		31,547,458	55,058,785	85,843,424	120,339,030	140,566,958	86,606,243
(13) Percentage with 3-4 pages	(12) divided by (1)	10.67%	10.67%	10.67%	10.67%	10.67%	10.67%
(14) Pieces with 5-6 pages		28,058,611	48,969,810	76,349,962	107,030,684	125,021,596	77,028,421
(15) Percentage with 5-6 pages	(14) divided by (1)	9.49%	9.49%	9.49%	9.49%	9.49%	9.49%
(16) Pieces with 7-10 pages		9,431,714	16,460,874	25,664,529	35,977,648	42,025,173	25,892,588
(17) Percentage with 7-10 pages	(16) divided by (1)	3.19%	3.19%	3.19%	3.19%	3.19%	3.19%
(18) Pieces with 11-15 pages		5,262,837	9,185,064	14,320,646	20,075,302	23,449,783	14,447,902
(19) Percentage with 11-15 pages	(18) divided by (1)	1.78%	1.78%	1.78%	1.78%	1.78%	1.78%
(20) Pieces with greater than 15 pages		20,844,384	36,379,047	56,719,413	79,511,730	92,876,950	57,223,432
(21) Percentage with greater than 15 pages	(20) divided by (1)	7.05%	7.05%	7.05%	7.05%	7.05%	7.05%
(22) Simplex Pieces (single-sided)		142,067,045	247,945,138	386,576,992	541,920,374	633,012,402	390,012,183
(23) Duplex Pieces (double-sided)	Ibid.	153,597,981	268,069,718	417,953,689	585,905,586	684,391,140	421,667,699
(24) Percentage of Simplex Pieces	(22) divided by (1)	48.05%	48.05%	48.05%	48.05%	48.05%	48.05%
(25) Percentage of Duplex Pieces	(23) divided by (1)	51.95%	51.95%	51.95%	51.95%	51.95%	51.95%
(26) Pieces printed on 8.5x11 paper		233,250,138	407,084,120	634,694,254	889,741,899	1,039,299,655	640,334,259
(27) Pieces printed on 8.5x14 paper	Ibid.	26,048,089	45,460,909	70,879,153	99,361,467	116,063,252	71,508,998
(28) Pieces printed on 11x17 paper	Ibid.	36,396,365	63,521,429	99,037,277	138,835,376	162,172,378	99,917,793
(29) Percentage of pieces printed on 8.5x11 paper	(26) divided by (1)	78.89%	78.89%	78.89%	78.89%	78.89%	78.89%
(30) Percentage of pieces printed on 8.5x14 paper	(27) divided by (1)	8.81%	8.81%	8.81%	8.81%	8.81%	8.81%
(31) Percentage of pieces printed on 11x17 paper	(28) divided by (1)	12.31%	12.31%	12.31%	12.31%	12.31%	12.31%
B&W breakdown of pages and impressions							
(32) Black and White pieces with 1-2 pages	(4) multiplied by (10)	111,312,300	194,269,851	302,890,612	424,605,180	495,977,561	305,582,151

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(33) Black and White pieces with 3-4 pages	(4) multiplied by (12)	17,515,149	30,568,638	47,660,269	66,812,229	78,042,775	48,083,786
(34) Black and White pieces with 5-6 pages	(4) multiplied by (14)	15,578,141	27,188,038	42,389,499	59,423,436	68,411,990	42,766,179
(35) Black and White pieces with 7-10 pages	(4) multiplied by (16)	5,236,488	9,139,077	14,248,946	19,974,790	23,332,376	14,375,565
(36) Black and White pieces with 11-15 pages	(4) multiplied by (18)	2,921,927	5,099,548	7,950,823	11,145,808	13,019,320	8,021,475
(37) Black and White pieces with greater than 15 pages	(4) multiplied by (20)	11,572,802	20,197,647	31,490,618	44,144,913	51,565,282	31,770,449
(38) 1.5 pages	(32) multiplied by 1	166,968,450	291,404,777	454,335,918	636,907,771	743,966,342	458,373,226
(39) 3.5 pages	(33) multiplied by 3	61,303,021	106,990,231	166,810,941	233,842,803	273,149,713	168,293,252
(40) 5.5 pages	(34) multiplied by 5	85,679,774	149,534,211	233,142,243	326,828,895	381,765,946	235,213,986
(41) 8.5 pages	(35) multiplied by 7	44,510,146	77,682,156	121,116,044	169,785,717	198,325,198	122,192,302
(42) 13 pages	(36) multiplied by 11	37,985,056	66,294,121	103,360,695	144,895,500	169,251,154	104,279,177
(43) 25 pages	(37) multiplied by 16	289,320,054	504,941,178	787,265,453	1,103,622,814	1,289,132,062	794,261,231
(44) Total B&W pages	Sum of (38) through (43)	685,766,501	1,196,846,674	1,866,031,294	2,615,883,501	3,055,590,414	1,882,613,175
(45) 8.5x11 B&W pages	(44) multiplied by (29)	541,001,192	944,192,341	1,472,112,088	2,063,670,494	2,410,555,277	1,485,193,534
(46) 8.5x11 B&W impressions from simplex printing	(45) multiplied by (24)	259,951,073	453,684,420	707,349,858	991,593,672	1,158,271,811	713,635,493
(47) 8.5x11 B&W impressions from duplex printing	(45) multiplied by (25) multiplied by 2.	562,100,239	981,015,843	1,528,524,459	2,144,153,643	2,504,566,933	1,543,116,081
(48) Total 8.5x11 B&W impressions	Sum of (46) and (47)	822,051,312	1,434,700,263	2,236,874,317	3,135,747,315	3,662,838,744	2,256,751,574
(49) 8.5x14 B&W pages	(44) multiplied by (30)	60,416,029	105,442,192	164,397,357	230,459,336	269,197,515	165,858,221
(50) 8.5x14 B&W impressions from simplex printing	(49) multiplied by (24)	29,029,902	50,684,973	78,992,930	110,735,711	129,349,406	79,894,875
(51) 8.5x14 B&W impressions from duplex printing	(49) multiplied by (25) multiplied by 2.	62,772,254	109,554,437	170,808,854	239,447,251	279,696,219	172,326,691
(52) Total 8.5x14 B&W impressions	Sum of (50) and (51)	91,802,156	160,239,411	249,801,784	350,182,962	409,045,625	252,021,566
(53) 11x17 B&W pages	(44) multiplied by (31)	84,417,856	147,331,826	229,708,452	322,015,259	376,143,180	231,749,682
(54) 11x17 B&W impressions from simplex printing	(53) multiplied by (24) multiplied by 2.	81,125,560	141,585,884	220,749,823	309,456,664	361,473,596	222,711,444
(55) 11x17 B&W impressions from duplex printing	(53) multiplied by (25) multiplied by 4.	175,420,305	306,155,534	477,334,164	669,147,708	781,625,528	481,575,839
(56) Total 11x17 B&W impressions	Sum of (54) and (55)	256,545,865	447,741,418	698,083,986	978,604,372	1,143,099,124	704,287,283
(57) Total B&W Impressions	Sum of (48), (52), and (56)	1,170,399,332	2,042,661,091	3,184,760,088	4,464,534,649	5,214,983,493	3,213,060,424
Spot Color breakdown of pages and impressions							
(58) Spot Color 1-2 pages	(5) multiplied by (10)	89,178,154	155,639,823	242,661,643	340,173,603	397,353,781	244,817,977
(59) Spot Color 3-4 pages	(5) multiplied by (12)	14,032,309	24,490,148	38,183,155	53,526,800	62,524,183	38,522,457
(60) Spot Color 5-6 pages	(5) multiplied by (14)	12,480,470	21,781,771	33,960,463	47,607,248	55,609,606	34,262,242
(61) Spot Color 7-10 pages	(5) multiplied by (16)	4,195,227	7,321,797	11,415,582	16,002,858	18,692,797	11,517,023
(62) Spot Color 11-15 pages	(5) multiplied by (18)	2,340,910	4,085,517	6,369,823	8,929,494	10,430,464	6,426,427
(63) Spot Color Greater than 15 pages	(5) multiplied by (20)	9,271,582	16,181,400	25,228,795	35,366,818	41,311,667	25,452,982
(64) 1.5 pages	(58) multiplied by 1.	133,767,231	233,459,735	363,992,464	510,260,404	596,030,671	367,226,965
(65) 3.5 pages	(59) multiplied by 3	49,113,083	85,715,517	133,641,042	187,343,802	218,834,640	134,828,600
(66) 5.5 pages	(60) multiplied by 5	68,642,586	119,799,743	188,782,546	261,839,864	305,852,833	189,442,329

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(67) 8.5 pages	(61) multiplied by 7	35,659,425	62,235,272	97,032,450	136,024,292	158,888,774	97,894,698
(68) 13 pages	(62) multiplied by 11	30,431,831	53,111,717	82,807,704	116,083,427	135,598,026	83,543,548
(69) 25 pages	(63) multiplied by 16	231,789,553	404,535,007	630,719,873	884,170,439	1,032,791,681	636,324,560
(70) <i>Total Spot Color pages</i>	Sum of (64) through (69)	549,403,709	958,856,990	1,494,976,080	2,095,722,228	2,447,994,625	1,508,260,699
(71) 8.5x11 Spot Color pages	(70) multiplied by (29)	433,424,586	756,442,279	1,179,386,629	1,653,315,266	1,931,222,960	1,189,866,866
(72) 8.5x11 Spot Color impressions from simplex printing	(71) multiplied by (24)	208,280,514	363,470,515	566,695,275	794,417,985	927,952,632	571,731,029
(73) 8.5x11 Spot Color impressions from duplex printing	(71) multiplied by (25) multiplied by 2.	450,328,145	785,943,528	1,225,382,708	1,717,794,561	2,006,540,655	1,236,271,673
(74) <i>Total 8.5x11 Spot Color impressions</i>	Sum of (72) and (73)	658,588,659	1,149,414,043	1,792,077,983	2,512,212,546	2,934,493,288	1,808,002,702
(75) 8.5x14 Spot Color pages	(70) multiplied by (30)	48,402,467	84,475,301	131,707,393	184,633,128	215,668,327	132,877,768
(76) 8.5x14 Spot Color impressions from simplex printing	(75) multiplied by (24)	23,257,385	40,590,382	63,285,402	88,716,218	103,628,631	63,847,767
(77) 8.5x14 Spot Color impressions from duplex printing	(75) multiplied by (25) multiplied by 2.	50,290,183	87,769,838	136,843,981	191,833,820	224,079,391	138,060,001
(78) <i>Total 8.5x14 Spot Color impressions</i>	Sum of (76) and (77)	73,547,548	128,360,220	200,129,383	280,550,038	327,708,022	201,907,768
(79) 11x17 Spot Color pages (convert to 8.5x14)	(70) multiplied by (31)	67,631,597	118,035,295	184,031,555	257,983,406	301,348,138	185,666,892
(80) 11x17 Spot Color impressions from simplex printing	(79) multiplied by (24)	32,496,982	56,715,959	88,427,162	123,961,027	144,797,780	89,212,942
(81) 11x17 Spot Color impressions from duplex printing	(79) multiplied by (25) multiplied by 2.	70,269,229	122,638,672	191,208,786	268,044,759	313,100,716	192,907,901
(82) <i>Total 11x17 Spot Color impressions (convert to 8.5x14)</i>	Sum of (80) and (81)	102,766,211	179,354,631	279,635,948	392,005,786	457,898,496	282,120,842
(83) <i>Total Spot Color Impressions</i>	Sum of (74), (78), and (82)	834,902,418	1,457,128,894	2,271,843,315	3,184,768,371	3,720,099,806	2,292,031,313
(84) <i>Total Impressions</i>	Sum of (57) and (83)	2,005,301,751	3,499,789,986	5,456,603,403	7,649,303,019	8,935,083,299	5,505,091,736
Summary of Impressions							
(85) B&W 8.5x11 & 8.5x14	Sum of (46) and (52)	913,853,467	1,594,919,673	2,486,676,101	3,465,930,277	4,071,884,369	2,508,773,141
(86) % B&W, 8.5x11 & 8.5x14	(85) divided by (84)	45.57%	45.57%	45.57%	45.57%	45.57%	
(87) B&W 11x17	Equals (56)	256,545,865	447,741,418	698,083,986	978,604,372	1,143,099,124	704,287,283
(88) % B&W, 11x17	(87) divided by (84)	12.79%	12.79%	12.79%	12.79%	12.79%	
(89) S.C. 8.5x11 & 8.5x14	Sum of (74), (78), and (82)	834,902,418	1,457,128,894	2,271,843,315	3,184,768,371	3,720,099,806	2,292,031,313
(90) % S.C., 8.5x11 & 8.5x14	(89) divided by (84)	41.63%	41.63%	41.63%	41.63%	41.63%	
(91) TOTAL	Sum of (85), (87), and (89)	2,005,301,751	3,499,789,986	5,456,603,403	7,649,303,019	8,935,083,299	5,505,091,736

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Table 5: Digital Printer Productivities

	Notes	1999	2000	2001	2002	2003
(1) Shifts per day	2 shifts assumed	2	2	2	2	2
(2) Business days per year	6 day workweek, subtract 10 holidays	302	302	302	302	302
Xerox DocuTech 6180						
<i>8.5x11 & 8.5x14 paper sizes</i>						
(3) Impressions per minute	Maximum 8.5x11/8.5x14 thruput. See LR-3/MC98-1, Tab B.	180	180	180	180	180
(4) Minutes per shift	8 hours multiplied by 60 minutes	480	480	480	480	480
(5) Maximum 8.5x11 and 8.5x14 impressions per day (2 shifts)	(1) multiplied by (3) multiplied by (4)	172,800	172,800	172,800	172,800	172,800
(6) Productivity adjustment factor	From CAP Ventures. See LR-3/MC98-1, Tab A.	68%	68%	68%	68%	68%
(7) Adjusted maximum 8.5x11 & 8.5x14 Impressions per day	(5) multiplied by (6)	117,504	117,504	117,504	117,504	117,504
(8) Maximum 8.5x11 and 8.5x14 Impressions per year	(2) multiplied by (7)	35,486,208	35,486,208	35,486,208	35,486,208	35,486,208
<i>11x17 paper size</i>						
(9) Impressions per minute	Maximum 11x17 thruput. See LR-3/MC98-1, Tab B.	77	77	77	77	77
(10) Minutes per shift	8 hours multiplied by 60 minutes	480	480	480	480	480
(11) Maximum 11x17 impressions per day	(1) multiplied by (9) multiplied by (10)	73,920	73,920	73,920	73,920	73,920
(12) Productivity adjustment factor	From CAP Ventures. See LR-3/MC98-1, Tab A.	68%	68%	68%	68%	68%
(13) Adjusted maximum 11x17 impressions per day	(11) multiplied by (12)	50,266	50,266	50,266	50,266	50,266
(14) Maximum 11x17 impressions per year	(2) multiplied by (13)	15,180,211	15,180,211	15,180,211	15,180,211	15,180,211
Xerox DocuTech 4890						
<i>8.5x11 and 8.5x14 paper sizes</i>						
(15) Impressions per minute	Maximum 8.5x11/8.5x14 thruput. See LR-3/MC98-1, Tab B.	90	90	90	90	90
(16) Minutes per shift	8 hours multiplied by 60 minutes	480	480	480	480	480
(17) Maximum 8.5x11 and 8.5x14 impressions per day	(1) multiplied by (15) multiplied by (16)	86,400	86,400	86,400	86,400	86,400
(18) Productivity adjustment factor	From CAP Ventures. See LR-3/MC98-1, Tab A.	68%	68%	68%	68%	68%
(19) Adjusted maximum 8.5x11 & 8.5x14 impressions per day	(17) multiplied by (18)	58,752	58,752	58,752	58,752	58,752
(20) Maximum 8.5x11 and 8.5x14 Impressions per year	(2) multiplied by (19)	17,743,104	17,743,104	17,743,104	17,743,104	17,743,104

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Table 6: Mailing Online Digital Printers Required

	Notes	1999	2000	2001	2002	2003
Xerox DocuTech 6180's						
(1) B&W 8.5x11 Impressions	From Table 4	822,051,312	1,434,700,263	2,236,874,317	3,135,747,315	3,662,838,744
(2) B&W 8.5x14 Impressions	Ibid.	91,802,156	160,219,411	249,801,784	350,182,962	409,045,625
(3) Total B&W 8.5x11 and 8.5x14 Impressions	Sum of (1) and (2)	913,853,467	1,594,919,673	2,486,676,101	3,485,930,277	4,071,884,369
(4) Annual Xerox DocuTech 6180 Productivity, 8.5x11 and 8.5x14	From Table 5	35,486,208	35,486,208	35,486,208	35,486,208	35,486,208
(5) Xerox DocuTech 6180's required for B&W 8.5x11 & 8.5x14	(3) divided by (4)	25.75	44.94	70.07	98.23	114.75
(6) Total Xerox DocuTech 6180's Required for B&W 8.5x11 & 8.5x14	(5) rounded up to the next machine	26	45	71	99	115
(7) B&W 11x17 Impressions	From Table 4	256,545,865	447,741,418	698,083,986	978,604,372	1,143,099,124
(8) Annual Xerox DocuTech 6180 Annual Productivity, 11x17	From Table 5	15,180,211	15,180,211	15,180,211	15,180,211	15,180,211
(9) Xerox DocuTech 6180's Required for B&W 11x17	(7) divided by (8)	16.90	29.50	45.986	64.47	75.302
(10) Total Xerox DocuTech 6180's Required for B&W 11x17	(9) rounded up to the next machine	17	30	46	65	76
(12) Total Xerox DocuTech 6180's Required	Sum of (6) and (10)	43	75	117	164	191
DocuTech 4890's						
(13) Spot Color 8.5x11 Impressions	From Table 4	658,588,659	1,149,414,043	1,792,077,983	2,512,212,546	2,934,493,288
(14) Spot Color 8.5x14 Impressions	Ibid.	73,547,548	128,360,220	200,129,383	280,550,038	327,708,022
(15) Spot Color 8.5x14 Impressions, Converted from 11x17	Ibid.	102,766,211	179,354,631	279,635,948	392,005,786	457,898,496
(16) Total Spot Color 8.5x11 and 8.5x14 Impressions	Sum of (13) through (15)	834,902,418	1,457,128,894	2,271,843,315	3,184,768,371	3,720,099,806
(17) Annual Xerox DocuTech 4890 Annual Productivity, 8.5x11 and 8.5x14	From Table 5	17,743,104	17,743,104	17,743,104	17,743,104	17,743,104
(18) Xerox DocuTech 4890's Required for Spot Color 8.5x11 & 8.5x14	(16) divided by (17)	47.055	82.124	128.041	179.493	209.665
(19) Total Xerox DocuTech 4890's Required	(18) rounded to the next machine	48	83	129	180	210

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Table 7: Inserter Productivities

	Notes	1999	2000	2001	2002	2003
(1) Shifts per day	2 shifts assumed	2	2	2	2	2
(2) Business days per year	6 day workweek, subtract 10 holidays	302	302	302	302	302
Pitney Bowes 9-Series Inserter						
<i>Letter-sized documents</i>						
(3) Pieces per hour	From a 6/98 telephone conversation with a Pitney Bowes sales representative.	6000	6000	6000	6000	6000
(4) Hours per shift	8 hours per shift	8	8	8	8	8
(5) Maximum letter-sized pieces per day (2 shifts)	(1) * (3) * (4)	96,000	96,000	96,000	96,000	96,000
(8) Maximum letter-sized pieces per year	(2) * (5)	28,992,000	28,992,000	28,992,000	28,992,000	28,992,000
Pitney Bowes 8-Series Inserter						
<i>Flat-sized documents</i>						
(9) Pieces per hour	From a 6/98 telephone conversation with a Pitney Bowes sales representative.	750	750	750	750	750
(10) Hours per shift	8 hours per shift	8	8	8	8	8
(11) Maximum flat-sized pieces per day (2 shifts)	(1) * (9) * (10)	12,000	12,000	12,000	12,000	12,000
(12) Maximum flat-sized pieces per year	(2) * (11)	3,624,000	3,624,000	3,624,000	3,624,000	3,624,000

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Table 8: Inserters Required

	Notes	1999	2000	2001	2002	2003
Total Annual Volume Breakout -- all sites						
(1) First-Class Letters	From Table 3	77,672,143	135,558,745	211,352,770	296,283,469	346,086,103
(2) First-Class Flats	Ibid.	14,072,713	24,560,663	38,293,098	53,680,923	62,704,212
(3) Standard Mail (A) Letters	Ibid.	172,640,919	301,304,758	469,771,207	658,545,628	769,241,332
(4) Standard Mail (A) Flats	Ibid.	31,279,247	54,590,685	85,113,598	118,315,929	139,371,882
(5) TOTAL	Sum of (1) through (4)	295,665,022	516,014,851	804,530,673	1,127,825,948	1,317,403,529
Pitney Bowes 9 Series Inserter						
(6) Total Letter-Sized Documents	(1) + (3)	250,313,062	436,863,503	681,123,977	954,829,097	1,115,327,435
(7) Annual 9 Series Productivity	From Table 7	28,992,000	28,992,000	28,992,000	28,992,000	28,992,000
(8) Total Number of 9 Series Required Annually	(6) divided by (7)	8.63	15.07	23.49	32.93	38.47
(9) Total 9 Series Required for Letter-Sized Documents	(8) rounded up to the next machine	9	16	24	33	39
Pitney Bowes 8 Series Inserter						
(10) Total Flat-Sized Documents	(2) + (4)	45,351,961	79,151,349	123,406,696	172,996,852	202,076,095
(11) Annual 8 Series Productivity	From Table 7	3,624,000	3,624,000	3,624,000	3,624,000	3,624,000
(12) Total Number of 8 Series Required Annually	(10) divided by (11)	12.51	21.84	34.05	47.74	55.76
(13) Total 8 Series Required for Flat-Sized Documents	(12) rounded up to the next machine	13	22	35	48	56

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Table 9: Mailing Online Print Site Rollout

	Notes	1999	2000	2001	2002	2003
(1) Total Sites per Year	In 2001-2003, 25 sites. In '99 and '00, (4) divided by (5)	9.1880	16.0256	25	25	25
(2) 6180's - 8.5x11 & 8.5x14	From Table 6	26	45	71	99	115
(3) 6180's - 11x17	Ibid.	17	30	46	65	76
(4) Total 6180's Required per Year	Sum of (3) and (4)	43	75	117	164	191
(5) 6180's per site	In 2001-2003, (4) divided by (1). In '99 and '00, use '01 results	4.68	4.68	4.68	6.56	7.64
(6) 6180's - 8.5x11 & 8.5x14 / site	In 2001-2003, (2) divided by (1). In '99 and '00, use '01 results	2.84	2.84	2.84	3.96	4.60
(7) 6180's - 11x17 / site	In 2001-2003, (3) divided by (1). In '99 and '00, use '01 results	1.84	1.84	1.84	2.60	3.04
(8) Total 4890's Required per Year	From Table 6	48	83	129	180	210
(9) 4890's per site	In 2001-2003, (8) divided by (1). In '99 and '00, use '01 results	5.16	5.16	5.16	7.20	8.40
(10) 9 Series Inserters Required Annually	From Table 8	9	16	24	33	39
(11) 9 Series Inserters per site	(10) divided by (1)	0.98	1.00	0.96	1.32	1.56
(12) 8 Series Inserters Required Annually	From Table 8	13	22	35	48	56
(13) 8 Series Inserters per site	(12) divided by (1)	1.41	1.37	1.40	1.92	2.24
Rounded Results						
(14) 6180's - 8.5x11 & 8.5x14/Site	(6) rounded to next highest printer	3	3	3	4	5
(15) 6180's - 11x17/Site	(7) rounded to next highest printer	2	2	2	3	4
(16) Total 6180's Required per Site	Sum of (10) and (11)	5	5	5	7	9
(17) Total 4890's Required per Site	(9) rounded to next highest printer	6	6	6	8	9
(18) Total 9 Series Inserters Required per Site	(11) rounded to next highest inserter	1	1	1	2	2
(19) Total 8 Series Inserters Required per Site	(13) rounded to next highest inserter	2	2	2	2	3
(20) Total Sites	(1) rounded to next highest site	10	17	25	25	25
(21) Total 6180's - 8.5x11 & 8.5x14	(14) * (20)	30	51	75	100	125
(22) Total 6180's - 11x17	(15) * (20)	20	34	50	75	100
(23) Total 4890's	(17) * (20)	60	102	150	200	225
(24) Total 9 Series (letters)	(18) * (20)	10	17	25	50	50
(25) Total 8 Series (flats)	(19) * (20)	20	34	50	50	75

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Table 10: Mailing Online Facility Costs

	Notes	1999	2000	2001	2002	2003	Total 1999 - 2000
Facility Costs Incurred from DocuTech 6180's							
(1) Number of B&W Printers Dedicated to 8.5x11 & 8.5x14	From Table 9	30	51	75	100	125	
(2) Number of B&W Printers Dedicated to 11x17	Ibid.	20	34	50	75	100	
(3) Square Footage Needed for 1 DocuTech 6180	From CAP Ventures. See LR-3/MC98-1, Tab F.	606	606	606	606	606	
(4) Annual Square Footage Needed for DocuTech 6180's - 8.5x11 & 8.5x14	(1) multiplied by (3)	18,180	30,906	45,450	60,600	75,750	
(5) Annual Square Footage Needed for DocuTech 6180's - 11x17	(2) multiplied by (3)	12,120	20,604	30,300	45,450	60,600	
(6) Rent per Square Foot	From USPS Facilities Group	\$6	\$6	\$6	\$6	\$6	
(7) Rent for DocuTech 6180's - 8.5x11 and 8.5x14	(4) multiplied by (6)	\$109,080	\$185,436	\$272,700	\$363,600	\$454,500	\$294,516
(8) Rent for DocuTech 6180's - 11x17	(5) multiplied by (6)	\$72,720	\$123,624	\$181,800	\$272,700	\$363,600	\$196,344
(9) Total Rent Allocated to DocuTech 6180's	Sum of (7) and (8)	\$181,800	\$309,060	\$454,500	\$636,300	\$818,100	\$490,860
(10) Utilities Cost per Square Foot	From USPS Facilities Group	\$2.25	\$2.25	\$2.25	\$2.25	\$2.25	
(11) Utilities Costs Incurred from DocuTech 6180's for 8.5x11 & 8.5x14	(4) multiplied by (10)	\$40,905	\$69,539	\$102,263	\$136,350	\$170,438	\$110,444
(12) Utilities Costs Incurred from DocuTech 6180's for 11x17	(5) multiplied by (10)	\$27,270	\$46,359	\$68,175	\$102,263	\$136,350	\$73,629
(13) Total Utilities Cost Incurred from DocuTech 6180's	Sum of (11) and (12)	\$68,175	\$115,898	\$170,438	\$238,613	\$306,788	\$184,073
(14) Total 6180 Costs Incurred for 8.5x11 and 8.5x14 (rent + utilities)	Sum of (7) and (11)	\$149,985	\$254,975	\$374,963	\$499,950	\$624,938	\$404,960
(15) Total 6180 Costs Incurred for 11x17 (rent + utilities)	Sum of (8) and (12)	\$99,990	\$169,983	\$249,975	\$374,963	\$499,950	\$269,973
(16) Total 6180 Facility Costs Incurred (rent + utilities)	Sum of (14) and (15)	\$249,975	\$424,958	\$624,938	\$874,913	\$1,124,888	\$674,933
Facility Costs Incurred from DocuTech 4890's							
(17) Number of 4890's Dedicated to 8.5x11 & 8.5x14	From Table 9	60	102	150	200	225	
(18) Square Footage Needed for 1 DocuTech 4890	From CAP Ventures. See LR-3/MC98-1, Tab F.	606	606	606	606	606	
(19) Annual Square Footage Needed for Xerox DocuTech 4890's	(17) multiplied by (18)	36,360	61,812	90,900	121,200	136,350	
(20) Rent per Square Foot	From USPS Facilities Group	\$6	\$6	\$6	\$6	\$6	
(21) Annual Facility Rent for DocuTech 4890's	(19) multiplied by (20)	\$218,160	\$370,872	\$545,400	\$727,200	\$818,100	\$589,032
(22) Utilities Cost per Square Foot	From USPS Facilities Group	\$2.25	\$2.25	\$2.25	\$2.25	\$2.25	
(23) Utilities Costs Incurred from DocuTech 4890's	(19) multiplied by (22)	\$81,810	\$139,077	\$204,525	\$272,700	\$306,788	\$220,887
(24) Total 4890 Facility Costs Incurred (rent + utilities)	Sum of (21) and (23)	\$299,970	\$509,949	\$749,925	\$999,900	\$1,124,888	\$809,919
Facility Costs Incurred from Inserters							
(25) Number of 9 Series Inserters	From Table 9	10	17	25	50	50	
(26) Number of 8 Series Inserters	Ibid.	20	34	50	50	75	
(27) Total Number of Inserters	Sum of (25) and (26)	30	51	75	100	125	
(28) Square Footage Needed for 9 Series	From Pitney Bowes. See LR-3/MC98-1, Tab F.	696	696	696	696	696	
(29) Square Footage Needed for 8 Series	Ibid.	493	493	493	493	493	
(30) Rent per Square Foot	From USPS Facilities Group	\$6	\$6	\$6	\$6	\$6	
(31) Rent for 9 Series	(25) * (28) * (30)	\$41,760	\$70,992	\$104,400	\$208,800	\$208,800	
(32) Rent for 8 Series	(26) * (29) * (30)	\$59,160	\$100,572	\$147,900	\$147,900	\$221,850	

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(33) Annual Facility Rent for Inserters	Sum of (31) and (32)	\$100,920	\$171,564	\$252,300	\$356,700	\$430,650	
(34) Utilities Cost per Square Foot	From USPS Facilities Group	\$2.25	\$2.25	\$2.25	\$2.25	\$2.25	
(35) Utilities Cost for 9 Series	(25) * (28) * (34)	\$15,660	\$26,622	\$39,150	\$78,300	\$78,300	
(36) Utilities Cost for 8 Series	(26) * (29) * (34)	\$22,185	\$37,715	\$55,463	\$55,463	\$83,194	
(37) Utilities Costs Incurred from Inserters	Sum of (35) and (36)	\$37,845	\$64,337	\$94,613	\$133,763	\$161,494	
(38) Total Inserter Facility Costs Incurred (rent + utilities)	Sum of (33) and (37)	\$138,765	\$235,901	\$346,913	\$490,463	\$592,144	
Allocated Costs:							
(39) Total DocuTech 6180 Facility Costs, 8.5x11 & 8.5x14	See (14)	\$149,985	\$254,975	\$374,963	\$499,950	\$624,938	\$404,960
(40) Total DocuTech 6180 Facility Costs, 11x17	See (15)	\$99,990	\$169,983	\$249,975	\$374,963	\$499,950	\$269,973
(41) Total DocuTech 4890 Facility Costs	See (24)	\$299,970	\$509,949	\$749,925	\$999,900	\$1,124,888	\$809,919
(42) Grand Total	Sum of (39) through (41)	\$549,945	\$934,907	\$1,374,863	\$1,874,813	\$2,249,775	\$1,484,852
(43) Total 9 Series Facility Costs (Letters)	Sum of (31) and (35)	\$57,420	\$97,614	\$143,550	\$287,100	\$287,100	\$155,034
(44) Total 8 Series Facility Costs (Flats)	Sum of (32) and (36)	\$81,345	\$138,287	\$203,363	\$203,363	\$305,044	\$219,832
(45) Grand Total	Sum of (43) and (44)	\$138,765	\$235,901	\$346,913	\$490,463	\$592,144	\$374,866

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Table 11: Mailing Online Personnel Costs

	Notes	1999	2000	2001	2002	2003	Total 1999 - 2000
Digital Printer Operators							
<i>DocuTech 6180's</i>							
(1) Gross Number of Docutech 6180 Printers Dedicated to 8.5x11 and 8.5x14	From Table 9	30	51	75	100	125	
(2) Gross Number of Docutech 6180 Printers Dedicated to 11x17	Ibid.	20	34	50	75	100	
(3) Number of Shifts	From Table 5	2	2	2	2	2	
(4) Hourly Wage Rate	From NAQP Wage & Salary Study, 1997-98. See LR-3/MC98-1, Tab D.	\$13.26	\$13.26	\$13.26	\$13.26	\$13.26	
(5) Annual Work Hours, 1 Shift	From Table 5, multiplied by 8	2,416	2,416	2,416	2,416	2,416	
(6) Annual Wages for 1 Operator, Excluding Benefits	(4) * (5)	\$32,036	\$32,036	\$32,036	\$32,036	\$32,036	
(7) Annual Wages for 1 Operator, Including Benefits	(6) with an additional 30% for benefits. See LR-3/MC98-1, Tab A.	\$41,647	\$41,647	\$41,647	\$41,647	\$41,647	
(8) Annual Inflation Rate	Estimated figure	3.00%	3.00%	3.00%	3.00%	3.00%	
(9) Years to Inflate (from 1997)	Base Year (-) 1997	2	3	4	5	6	
(10) Compound inflation rate	Compounded rate	6.09%	9.27%	12.55%	15.93%	19.41%	
(11) Adjusted annual wages for 1 operator	(7) * (1 + (10))	\$44,183	\$45,509	\$46,874	\$48,280	\$49,729	
(12) DocuTech 6180 Operators, 8.5x11 & 8.5x14	(11) * (3) * (11)	\$2,650,999	\$4,641,899	\$7,031,111	\$9,656,059	\$12,432,176	\$7,292,897
(13) DocuTech 6180 Operators, 11x17	(2) * (3) * (11)	\$1,767,332	\$3,094,599	\$4,687,407	\$7,242,044	\$9,945,741	\$4,861,932
(14) DocuTech 6180 Operators Total	Sum of (12) and (13)	\$4,418,331	\$7,736,498	\$11,718,519	\$16,898,104	\$22,377,917	\$12,154,829
<i>DocuTech 4890's</i>							
(15) Gross Number of DocuTech 4890's	From Table 9	60	102	150	200	225	
(16) Number of Shifts	From Table 5	2	2	2	2	2	
(17) Hourly Wage Rate	From NAQP Wage & Salary Study, 1997-98. See LR-3/MC98-1, Tab D.	\$13.26	\$13.26	\$13.26	\$13.26	\$13.26	
(18) Annual Work Hours, 1 Shift	From Table 5, multiplied by 8	2,416	2,416	2,416	2,416	2,416	
(19) Annual Wages for 1 Operator, Excluding Benefits	(17) * (16)	\$32,036	\$32,036	\$32,036	\$32,036	\$32,036	
(20) Annual Wages for 1 Operator, Including Benefits	(19) with an additional 30% for benefits. See LR-3/MC98-1, Tab A.	\$41,647	\$41,647	\$41,647	\$41,647	\$41,647	
(21) Annual Inflation Rate	Estimated figure	3.00%	3.00%	3.00%	3.00%	3.00%	
(22) Years to Inflate (from 1997)	Base Year (-) 1997	2	3	4	5	6	
(23) Compound inflation rate	Compounded rate	6.09%	9.27%	12.55%	15.93%	19.41%	
(24) Adjusted annual wages for 1 operator	(20) * (1 + (23))	\$44,183	\$45,509	\$46,874	\$48,280	\$49,729	
(25) DocuTech 4890 Operators Total	(15) * (16) * (24)	\$5,301,997	\$9,283,797	\$14,062,222	\$19,312,119	\$22,377,917	\$14,585,795
(26) Digital Printer Operators, Subtotal	Sum of (14) and (25)	\$9,720,328	\$17,020,295	\$25,780,741	\$36,210,222	\$44,755,835	\$26,740,623
Contingency Operators							
(27) Number of print sites	From Table 9	10	17	25	25	25	
(28) Contingency Operators Allocated to DocuTech 6180, 8.5x11 & 8.5x14	(11) * (27) * ((12) / (28))	\$120,500	\$210,895	\$319,596	\$321,869	\$345,338	\$331,495
(29) Contingency Operators Allocated to DocuTech 6180, 11x17	(11) * (27) * ((13) / (28))	\$80,333	\$140,664	\$213,064	\$241,401	\$276,271	\$220,997
(30) Contingency Operators Allocated to DocuTech 4890	(24) * (27) * ((25) / (28))	\$241,000	\$421,991	\$639,192	\$643,737	\$621,609	\$662,991
(31) Contingency Operators, Total	Sum of (28) through (30)	\$441,833	\$773,550	\$1,171,852	\$1,207,007	\$1,243,218	\$1,215,483
(32) Total, DocuTech 6180, 8.5x11 & 8.5x14	Sum of (12) and (28)	\$2,771,499	\$4,852,894	\$7,350,707	\$9,977,928	\$12,777,515	\$7,624,393
(33) Total, DocuTech 6180, 11x17	Sum of (13) and (29)	\$1,847,666	\$3,235,263	\$4,900,471	\$7,483,446	\$10,222,012	\$5,082,928
(34) Total, DocuTech 4890	Sum of (25) and (30)	\$5,542,997	\$9,705,788	\$14,701,414	\$19,955,856	\$22,999,526	\$15,248,785
(35) Total Digital Printer Operators, Including Contingency	Sum of (33) through (35)	\$10,162,161	\$17,793,945	\$26,952,593	\$37,417,230	\$45,999,053	\$27,956,106
Insertor Operators							
(36) Gross Number of 9 Series Inserters	From Table 9	10	17	25	50	50	
(37) Gross Number of 8 Series Inserters	Ibid.	20	34	50	50	75	
(38) Number of Shifts	From Table 7, multiplied by 8	2	2	2	2	2	
(39) Hourly Wage Rate	See (4)	\$13.26	\$13.26	\$13.26	\$13.26	\$13.26	

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(40) Annual Work Hours, 1 Shift	From Table 7, multiplied by 8	2,416	2,416	2,416	2,416	2,416
(41) Annual Wages for 1 Operator, Excluding Benefits	(39) * (40)	\$32,036	\$32,036	\$32,036	\$32,036	\$32,036
(42) Annual Wages for 1 Operator, Including Benefits	(41) with an additional 30% for benefits. See LR-3/MC98-1, Tab A.	\$41,647	\$41,647	\$41,647	\$41,647	\$41,647
(43) Annual Inflation Rate	Estimated figure	3.00%	3.00%	3.00%	3.00%	3.00%
(44) Years to Inflation (from 1997)	Base Year (-) 1997	2	3	4	5	6
(45) Compound inflation rate	Compounded rate	6.09%	9.27%	12.55%	15.93%	19.41%
(46) Adjusted annual wages for 1 operator	(42) * (1 + (45))	\$44,183	\$45,509	\$46,874	\$48,280	\$49,729
(47) 9 Series Operators	(36) * (38) * (46)	\$883,666	\$1,547,300	\$2,343,704	\$4,828,030	\$4,972,871
(48) 8 Series Operators	(37) * (38) * (46)	\$1,767,332	\$3,094,599	\$4,687,407	\$4,828,030	\$7,459,306
(49) Inserter Operators Total	(47) + (48)	\$2,650,999	\$4,641,899	\$7,031,111	\$9,656,059	\$12,432,176
Sweepers						
(50) Number of print sites	See (27)	10	17	25	25	25
(51) Number of shifts	See (37)	2	2	2	2	2
(52) Total Shifts	(50) * (51)	20	34	50	50	50
(53) Total Sweeper Annual Salaries	(46) * (52)	\$883,666	\$1,547,300	\$2,343,704	\$2,414,015	\$2,486,435
(54) Sweepers Allocated to 9 Series	(53) * ((47)/(49))	\$294,555	\$515,767	\$781,235	\$1,207,007	\$994,574
(55) Sweepers Allocated to 8 Series	(53) * ((48)/(49))	\$589,111	\$1,031,533	\$1,562,469	\$1,207,007	\$1,491,861
(56) Sweepers Total	(54) + (55)	\$883,666	\$1,547,300	\$2,343,704	\$2,414,015	\$2,486,435
(57) Total 9 Series Inserter Operators, Including Sweepers	(47) + (54)	\$1,178,222	\$2,063,066	\$3,124,938	\$6,035,037	\$5,967,445
(58) Total 8 Series Inserter Operators, Including Sweepers	(48) + (55)	\$2,356,443	\$4,126,132	\$6,249,877	\$6,035,037	\$8,951,167
(59) Total Inserter Operators, Including Sweepers	(57) + (58)	\$3,534,665	\$6,189,198	\$9,374,815	\$12,070,074	\$14,918,612
(60) Total Digital Printer and Inserter Personnel Costs	(35) + (59)	\$13,696,626	\$23,983,143	\$36,327,406	\$49,487,304	\$60,917,864
Supervisors						
<i>Supervisors Allocated to DocuTech 6180's</i>						
(61) Number of print sites	From Table 9	10	17	25	25	25
(62) Number of shifts	From Table 5	2	2	2	2	2
(63) Hourly Wage Rate	From NAQP Wage & Salary Study, 1997-98. See LR-3/MC98-1, Tab D.	\$14.59	\$14.59	\$14.59	\$14.59	\$14.59
(64) Annual Work Hours, 1 Shift	From Table 5, multiplied by 8	2,416	2,416	2,416	2,416	2,416
(65) Annual Wages for 1 Supervisor, Excluding Benefits	(63) multiplied by (64)	\$35,249	\$35,249	\$35,249	\$35,249	\$35,249
(66) Annual Wages for 1 Supervisor, Including Benefits	(65) with an additional 30% for benefits. See LR-3/MC98-1, Tab A.	\$45,824	\$45,824	\$45,824	\$45,824	\$45,824
(67) Annual Inflation Rate	Estimated figure	3.00%	3.00%	3.00%	3.00%	3.00%
(68) Years to Inflation (from 1997)	Base Year (-) 1997	2	3	4	5	6
(69) Compound inflation rate	Compounded rate	6.09%	9.27%	12.55%	15.93%	19.41%
(70) Adjusted annual wages for 1 supervisor	(66) multiplied by (1 + (69))	\$48,615	\$50,073	\$51,576	\$53,123	\$54,717
(70) Supervisors Allocated to DocuTech 6180's, 8.5x11& 8.5x14	(61) * (62) * (70) * ((32) / (60))	\$196,741	\$344,493	\$521,806	\$535,548	\$573,842
(71) Supervisors Allocated to DocuTech 6180's, 11x17	(61) * (62) * (70) * ((33) / (60))	\$131,161	\$229,662	\$347,871	\$401,661	\$459,073
(72) Total Supervisors Allocated to DocuTech 6180's	Sum of (70) and (71)	\$327,902	\$574,156	\$869,677	\$937,209	\$1,032,915
<i>Supervisors Allocated to DocuTech 4890's</i>						
(73) Number of print sites	From Table 9	10	17	25	25	25
(74) Number of shifts	From Table 5	2	2	2	2	2
(75) Hourly Wage Rate	See (63)	\$14.59	\$14.59	\$14.59	\$14.59	\$14.59
(76) Annual Work Hours	From Table 5, multiplied by 8	2,416	2,416	2,416	2,416	2,416
(77) Annual Supervisor Salary, Excluding Benefits	(75) * (76)	\$35,249	\$35,249	\$35,249	\$35,249	\$35,249
(78) Annual Wages for 1 Supervisor, Including Benefits	(76) with an additional 30% for benefits. See LR-3/MC98-1, Tab A.	\$45,824	\$45,824	\$45,824	\$45,824	\$45,824
(80) Annual Inflation Rate	Estimated figure	3.00%	3.00%	3.00%	3.00%	3.00%
(81) Years to Inflation (from 1997)	Base Year (-) 1997	2	3	4	5	6
(82) Compound inflation rate	Compounded rate	6.09%	9.27%	12.55%	15.93%	19.41%
(83) Adjusted annual wages for 1 supervisor	(78) * (1 + (82))	\$48,615	\$50,073	\$51,576	\$53,123	\$54,717

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(84) Total Supervisors Allocated to DocuTech 4890's	$(74) * (75) * (83) * ((34) / (60))$	\$393,482	\$688,987	\$1,043,612	\$1,071,096	\$1,032,915	\$1,082,469
(85) Supervisors Allocated to Inserters							
(86) Supervisors Allocated to 9 Series Inserters	$(74) * (75) * (83) * ((57) / (60))$	\$83,639	\$146,451	\$221,831	\$323,920	\$268,000	
(87) Supervisors Allocated to 8 Series Inserters	$(74) * (75) * (83) * ((58) / (60))$	\$167,277	\$292,903	\$443,661	\$323,920	\$401,999	
(88) Total Supervisors Allocated to Inserters		\$250,916	\$439,354	\$665,492	\$647,840	\$669,999	
(89) Copier Department Supervisors Total	Sum of (72), (84), and (88)	\$972,299	\$1,702,496	\$2,578,781	\$2,856,145	\$2,735,829	\$2,874,796
Allocated Costs:							
(90) DocuTech 6180, 8.5x11 & 8.5x14 Subtotal	Sum of (32) and (70)	\$2,968,240	\$5,197,387	\$7,872,513	\$10,513,476	\$13,351,356	\$8,165,627
(91) GSA Costs (General Sales and Administration)	42% of (90). See LR-3/MC98-1, Tab A.	\$1,246,661	\$2,182,903	\$3,306,456	\$4,415,660	\$5,607,570	\$3,429,563
(92) Total	Sum of (90) and (91)	\$4,214,900	\$7,380,290	\$11,178,969	\$14,929,136	\$18,958,926	\$11,595,190
(93) DocuTech 6180, 11x17 Subtotal	Sum of (33) and (71)	\$1,978,826	\$3,464,925	\$5,248,342	\$7,885,107	\$10,681,085	\$5,443,751
(94) GSA Costs	42% of (93). See LR-3/MC98-1, Tab A.	\$831,107	\$1,455,268	\$2,204,304	\$3,311,745	\$4,486,056	\$2,286,376
(95) Total	Sum of (93) and (94)	\$2,809,933	\$4,920,193	\$7,452,646	\$11,196,852	\$15,167,141	\$7,730,127
(96) Docutech 4890 Subtotal	Sum of (34) and (84)	\$5,936,479	\$10,394,775	\$15,745,027	\$21,026,952	\$24,032,441	\$16,331,254
(97) GSA Costs	42% of (96). See LR-3/MC98-1, Tab A.	\$2,493,321	\$4,365,805	\$6,612,911	\$8,831,320	\$10,093,625	\$6,859,127
(98) Total	Sum of (96) and (97)	\$8,429,800	\$14,760,580	\$22,357,938	\$29,858,271	\$34,126,067	\$23,190,380
(99) 9 Series Operators Subtotal	Sum of (57) and (86)	\$1,261,860	\$2,209,517	\$3,346,769	\$6,358,957	\$6,235,444	\$3,471,378
(100) GSA Costs	42% of (99). See LR-3/MC98-1, Tab A.	\$529,981	\$927,997	\$1,405,643	\$2,670,762	\$2,618,887	\$1,457,979
(101) Total	Sum of (99) and (100)	\$1,791,842	\$3,137,515	\$4,752,412	\$9,029,719	\$8,854,331	\$4,929,356
(102) 8 Series Operators Subtotal	Sum of (58) and (87)	\$2,523,721	\$4,419,035	\$6,693,538	\$6,358,957	\$9,353,166	\$6,942,755
(103) GSA Costs	42% of (102). See LR-3/MC98-1, Tab A.	\$1,059,963	\$1,855,995	\$2,811,286	\$2,670,762	\$3,928,330	\$2,915,957
(104) Total	Sum of (102) and (103)	\$3,583,683	\$6,275,029	\$9,504,824	\$9,029,719	\$13,281,496	\$9,858,712
(105) GRAND TOTAL	Sum of (92), (95), (98), (101), and (104)	\$20,830,159	\$36,473,608	\$55,246,788	\$74,043,697	\$90,387,960	\$57,303,766

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Table 12: Mailing Online Hardware Costs

	Notes	1999	2000	2001	2002	2003	Total 1999 - 2003
DocuTech 6180's							
(1) Gross Number of 6180's Leased per Year - 8.5x11 & 8.5x14	From Table 10	30	51	75	100	125	
(2) Gross Number of 6180's Leased per Year - 11x17	Ibid.	20	34	50	75	100	
(3) Total Number of 6180's Leased per Year	Sum of (1) and (2)	50	85	125	175	225	
(4) Leasing Cost per DocuTech 6180 & Signature Booklet Maker per year	From Xerox Business Services. See LR-3MCS-1, Tab C.	\$87,600	\$87,600	\$87,600	\$87,600	\$87,600	\$175,200
(5) Cost to Lease 6180's - 8.5x11 & 8.5x14	(1) multiplied by (4)	\$2,628,000	\$4,467,600	\$6,570,000	\$8,760,000	\$10,950,000	\$7,095,600
(6) Cost to Lease 6180's - 11x17	(2) multiplied by (4)	\$1,752,000	\$2,976,000	\$4,380,000	\$6,570,000	\$8,760,000	\$4,730,400
(7) Total Cost to Lease 6180's & Booklet Makers	Sum of (5) and (6)	\$4,380,000	\$7,443,600	\$10,950,000	\$15,330,000	\$19,710,000	\$11,826,000
DocuTech 4890's							
(8) Annual 8.5x11 B&W Impression volume	From Table 4	822,051,312	1,434,700,263	2,236,874,317	3,135,747,315	3,882,836,744	2,256,751,574
(9) Annual 8.5x14 B&W Impression volume	Ibid.	51,822,156	160,219,411	248,801,784	350,182,982	408,045,825	252,021,566
(10) Annual 11x17 B&W Impression volume	Ibid.	250,545,895	447,741,416	698,063,996	978,604,372	1,143,096,124	704,287,263
DocuTech 4890's							
(11) Total Number of 4890's Leased per Year	From Table 10	80	102	150	200	225	162
(12) Leasing Cost per DocuTech 4890 & Signature Booklet Maker for 1 year	From Xerox Business Services. See LR-3MCS-1, Tab C.	\$49,884	\$49,884	\$49,884	\$49,884	\$49,884	\$96,766
(13) Cost to Lease all 4890's & Signature Booklet Makers	(12) multiplied by (11)	\$2,983,040	\$5,088,198	\$7,482,600	\$9,976,800	\$11,223,900	\$8,081,206

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Table 12: Mailing Online Hardware Costs

	Notes	1999	2000	2001	2002	2003	Total 1999 - 2000
DocuTech 6180's							
(1) Gross Number of 6180's Leased per Year - 8.5x11 & 8.5x14	From Table 10	30	51	75	100	125	
(2) Gross Number of 6180's Leased per Year - 11x17	Ibid.	20	34	50	75	100	
(3) Total Number of 6180's Leased per Year	Sum of (1) and (2)	50	85	125	175	225	
(4) Leasing Cost per DocuTech 6180 & Signature Booklet Maker per year	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$87,600	\$87,600	\$87,600	\$87,600	\$87,600	\$175,200
(5) Cost to Lease 6180's - 8.5x11 & 8.5x14	(1) multiplied by (4)	\$2,628,000	\$4,467,600	\$6,570,000	\$8,760,000	\$10,950,000	\$7,095,600
(6) Cost to Lease 6180's - 11x17	(2) multiplied by (4)	\$1,752,000	\$2,978,400	\$4,380,000	\$5,625,000	\$6,760,000	\$4,730,400
(7) Total Cost to Lease 6180's & Booklet Makers	Sum of (5) and (6)	\$4,380,000	\$7,446,000	\$10,950,000	\$15,330,000	\$19,710,000	\$11,826,000
DocuTech 6180 Maintenance Costs							
(8) Annual 8.5x11 B&W impression volume	From Table 4	822,051,312	1,434,700,263	2,236,874,317	3,135,747,315	3,662,838,744	2,256,751,574
(9) Annual 8.5x14 B&W impression volume	Ibid.	91,802,158	160,219,411	249,801,784	350,182,962	409,045,625	252,021,566
(10) Annual 11x17 B&W impression volume	Ibid.	256,545,865	447,741,418	698,083,986	978,604,372	1,143,099,124	704,287,283
(11) Per Click printer maintenance charge	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$0.0019	\$0.0019	\$0.0019	\$0.0019	\$0.0019	
(12) Annual maintenance costs for DocuTech 6180 - 8.5x11 & 8.5x14	Sum of (8) and (9), multiplied by (11)	\$1,736,322	\$3,030,347	\$4,724,685	\$6,623,268	\$7,736,580	\$4,766,669
(13) Annual maintenance costs for DocuTech 6180 - 11x17	(10) multiplied by (11)	\$487,437	\$850,709	\$1,326,360	\$1,859,348	\$2,171,888	\$1,338,146
(14) Annual maintenance costs for all DocuTech 6180's	Sum of (12) and (13)	\$2,223,759	\$3,881,056	\$6,051,044	\$8,482,616	\$9,908,469	\$6,104,815
DocuTech 6180 Signature Booklet Maker Maintenance Costs							
(15) Per click Signature Booklet Maker maintenance charge	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$0.0020	\$0.0020	\$0.0020	\$0.0020	\$0.0020	
(16) Yearly maintenance costs for Booklet Makers - 8.5x11 & 8.5x14	Sum of (8) and (9), multiplied by (15)	\$1,827,707	\$3,189,839	\$4,973,352	\$6,971,861	\$8,143,769	\$5,017,546
(17) Yearly maintenance costs for Booklet Makers - 11x17	(10) multiplied by (15)	\$513,092	\$895,483	\$1,396,168	\$1,957,209	\$2,286,198	\$1,408,575
(18) Annual maintenance costs for all Signature Booklet Makers	Sum of (16) and (17)	\$2,340,799	\$4,085,322	\$6,369,520	\$8,929,069	\$10,429,967	\$6,426,121
(19) Total DocuTech 6180 Maintenance Costs - 8.5x11 & 8.5x14	Sum of (12) and (16)	\$3,564,029	\$6,220,187	\$9,698,037	\$13,595,128	\$15,880,349	\$9,784,215
(20) Total DocuTech 6180 Maintenance Costs - 11x17	Sum of (13) and (17)	\$1,000,529	\$1,746,192	\$2,722,528	\$3,816,557	\$4,458,087	\$2,746,720
(21) Total DocuTech 6180 Maintenance Costs	Sum of (19) and (20)	\$4,564,557	\$7,966,378	\$12,420,564	\$17,411,685	\$20,338,436	\$12,530,936
DocuTech 4890's							
(22) Total Number of 4890's Leased per Year	From Table 10	60	102	150	200	225	162
(23) Leasing Cost per DocuTech 4890 & Signature Booklet Maker for 1 year	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$49,884	\$49,884	\$49,884	\$49,884	\$49,884	\$99,768
(24) Cost to Lease all 4890's & Signature Booklet Makers	(22) multiplied by (23)	\$2,993,040	\$5,088,168	\$7,482,600	\$9,976,800	\$11,223,900	\$8,081,208
DocuTech 4890 Maintenance Costs							
(25) Annual 8.5x11 Spot Color impression volume	From Table 6	658,588,659	1,149,414,043	1,792,077,983	2,512,212,546	2,934,493,288	1,808,002,702
(26) Annual 8.5x14 Spot Color impression volume	Ibid.	176,313,759	307,714,851	479,765,332	672,555,824	785,606,518	484,028,610
(27) Per Click printer maintenance charge/page	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$0.0035	\$0.0035	\$0.0035	\$0.0035	\$0.0035	
(28) Annual maintenance costs for all DocuTech 4890's - 8.5x11 & 8.5x14	Sum of (25) and (26), multiplied by (27)	\$2,922,158	\$5,099,951	\$7,951,452	\$11,146,689	\$13,020,349	\$8,022,110
(29) Per click Signature Booklet Maker maintenance charge	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$0.0020	\$0.0020	\$0.0020	\$0.0020	\$0.0020	
(30) Yearly maintenance costs for Booklet Makers - 8.5x11 & 8.5x14	Sum of (25) and (26), multiplied by (29)	\$1,669,805	\$2,914,258	\$4,543,687	\$6,369,537	\$7,440,200	\$4,584,063
(31) Total DocuTech 4890 Maintenance Costs	Sum of (28) and (30)	\$4,591,963	\$8,014,209	\$12,495,138	\$17,516,226	\$20,460,549	\$12,606,172
(32) Total Lease Costs (6180 and 4890)	Sum of (7) and (24)	\$7,373,040	\$12,534,168	\$18,432,600	\$25,306,800	\$30,933,900	\$19,907,208
(33) Total Maintenance Costs (6180 and 4890)	Sum of (21) and (31)	\$9,156,521	\$15,980,587	\$24,915,703	\$34,927,911	\$40,798,985	\$25,137,108
Inserters							
(34) Total Number of 9 Series Leased per Year	From Table 9	10	17	25	50	50	
(35) Leasing Cost per 9 Series per Year	From a 8/98 telephone conversation w/ a Pitney Bowes sales representative.	\$82,296	\$82,296	\$82,296	\$82,296	\$82,296	\$164,592
(36) Cost to Lease all 9 Series	(34) * (35)	\$822,960	\$1,399,032	\$2,057,400	\$4,114,800	\$4,114,800	

(37) Maintenance charge per 9 Series per Year	From a 6/98 telephone conversation w/ a Pliny Bowes sales representative.	\$39,000	\$39,000	\$39,000	\$39,000	\$39,000	
(38) Total 9-Series Maintenance Charges	(34) * (37)	\$390,000	\$663,000	\$975,000	\$1,950,000	\$1,950,000	
(39) Total Number of 8 Series Leased per Year	From Table 9	20	34	50	50	75	
(40) Leasing Cost per 8 Series per Year	From a 6/98 telephone conversation w/ a Pliny Bowes sales representative.	\$63,300	\$63,300	\$63,300	\$63,300	\$63,300	\$126,600
(41) Cost to Lease all 8 Series	(39) * (40)	\$1,266,000	\$2,152,200	\$3,165,000	\$3,165,000	\$4,747,500	
(42) Maintenance charge per 8 Series per Year	From a 6/98 telephone conversation w/ a Pliny Bowes sales representative.	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	
(43) Total 8-Series Maintenance Charges	(39) * (42)	\$600,000	\$1,020,000	\$1,500,000	\$1,500,000	\$2,250,000	
(44) Total Lease Costs (9 Series and 8 Series)	(35) + (41)	\$2,088,960	\$3,551,232	\$5,222,400	\$7,279,800	\$8,862,300	
(45) Total Maintenance Costs (9 Series and 8 Series)	(38) + (43)	\$990,000	\$1,683,000	\$2,475,000	\$3,450,000	\$4,200,000	
Allocation of Costs:							
(46) Total 6180, 8.5x11 & 8.5x14 Lease Costs	See (5)	\$2,628,000	\$4,467,600	\$6,570,000	\$8,760,000	\$10,950,000	\$7,095,600
(47) Total 6180, 8.5x11 & 8.5x14 Maintenance Costs	See (19)	\$3,564,028	\$6,220,187	\$9,698,037	\$13,595,128	\$15,880,348	\$9,784,215
(48) TOTAL, 6180 8.5x11 & 8.5x14	Sum of (46) and (47)	\$6,192,028	\$10,687,787	\$16,268,037	\$22,355,128	\$26,830,348	\$16,879,815
(49) Total 6180, 11x17 Lease Costs	See (6)	\$1,752,000	\$2,978,400	\$4,380,000	\$6,570,000	\$8,760,000	\$4,730,400
(50) Total 6180, 11x17 Maintenance Costs	See (20)	\$1,000,528	\$1,746,192	\$2,722,528	\$3,816,557	\$4,456,087	\$2,746,720
(51) TOTAL, 6180 11x17	Sum of (49) and (50)	\$2,752,528	\$4,724,592	\$7,102,528	\$10,386,557	\$13,216,087	\$7,477,120
(52) Total 4890 Lease Costs	See (24)	\$2,993,040	\$5,088,168	\$7,482,800	\$9,976,800	\$11,223,900	\$8,081,208
(53) Total 4890 Maintenance Costs	See (31)	\$4,591,963	\$8,014,209	\$12,495,138	\$17,516,226	\$20,480,549	\$12,606,172
(54) TOTAL, 4890	Sum of (52) and (53)	\$7,585,003	\$13,102,377	\$19,977,938	\$27,493,026	\$31,684,449	\$20,687,380
(55) Total 9 Series Inserter Lease Costs	See (36)	\$822,960	\$1,399,032	\$2,057,400	\$4,114,800	\$4,114,800	\$2,221,992
(56) Total 9 Series Maintenance Costs	See (38)	\$390,000	\$663,000	\$975,000	\$1,950,000	\$1,950,000	\$1,053,000
(57) TOTAL, 9 Series	Sum of (55) and (56)	\$1,212,960	\$2,062,032	\$3,032,400	\$6,064,800	\$6,064,800	\$3,274,992
(58) Total 8 Series Inserter Lease Costs	See (41)	\$1,266,000	\$2,152,200	\$3,165,000	\$3,165,000	\$4,747,500	\$3,418,200
(59) Total 8 Series Maintenance Costs	See (43)	\$600,000	\$1,020,000	\$1,500,000	\$1,500,000	\$2,250,000	\$1,620,000
(60) TOTAL, 8 Series	Sum of (58) and (59)	\$1,866,000	\$3,172,200	\$4,665,000	\$4,665,000	\$6,997,500	\$5,038,200

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		Inventories									
		Total Number of 8 Series Leased per Year									
		Leasing Cost per 8 Series per Year									
		Cost to Lease all 8 Series									
		Maintenance charge per 8 Series per Year									
		Total 8-Series Maintenance Charges									

Table 13: Mailing Online Consumables Costs

	Notes	1999	2000	2001	2002	2003	Total 1999 - 2000
Xerox DocuTech 6180							
<i>Toner</i>							
(1) Toner Charge per Impression	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$0.0012	\$0.0012	\$0.0012	\$0.0012	\$0.0012	
(2) 8.5x11 & 8.5x14 B&W Impressions	From Table 4	913,853,467	1,594,919,673	2,486,676,101	3,485,930,277	4,071,884,369	2,508,773,141
(3) 11x17 B&W Impressions	Ibid.	256,545,865	447,741,418	698,083,986	978,604,372	1,143,099,124	704,287,283
(4) 8.5x11 & 8.5x14 Toner Cost	(1) multiplied by (2)	\$1,125,701	\$1,964,651	\$3,063,133	\$4,294,032	\$5,015,821	\$3,090,352
(5) 11x17 Toner Cost	(1) multiplied by (3)	\$316,018	\$551,536	\$859,913	\$1,205,463	\$1,408,090	\$867,554
(6) Total B&W Toner	Sum of (4) and (5)	\$1,441,719	\$2,516,187	\$3,923,045	\$5,499,495	\$6,423,911	\$3,957,906
<i>Developer</i>							
(7) Developer Charge per Impression	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$0.0004	\$0.0004	\$0.0004	\$0.0004	\$0.0004	
(8) 8.5x11 & 8.5x14 B&W Impressions	From Table 4	913,853,467	1,594,919,673	2,486,676,101	3,485,930,277	4,071,884,369	2,508,773,141
(9) 11x17 B&W Impressions	Ibid.	256,545,865	447,741,418	698,083,986	978,604,372	1,143,099,124	704,287,283
(10) 8.5x11 & 8.5x14 B&W Developer Cost	(7) multiplied by (8)	\$359,449	\$627,335	\$978,093	\$1,371,133	\$1,601,808	\$986,784
(11) 11x17 B&W Developer Cost	(7) multiplied by (9)	\$100,908	\$176,112	\$274,580	\$384,918	\$449,619	\$277,020
(12) Total B&W Developer	Sum of (10) and (11)	\$460,357	\$803,447	\$1,252,672	\$1,756,050	\$2,051,227	\$1,263,804
<i>Fuser Agent</i>							
(13) Fuser Agent Charge per Impression	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$0.0002	\$0.0002	\$0.0002	\$0.0002	\$0.0002	
(14) 8.5x11 & 8.5x14 B&W Impressions	From Table 4	913,853,467	1,594,919,673	2,486,676,101	3,485,930,277	4,071,884,369	2,508,773,141
(15) 11x17 B&W Impressions	Ibid.	256,545,865	447,741,418	698,083,986	978,604,372	1,143,099,124	704,287,283
(16) 8.5x11 & 8.5x14 B&W Fuser Agent Cost	(13) multiplied by (14)	\$149,872	\$261,567	\$407,815	\$571,693	\$667,789	\$411,439
(17) 11x17 B&W Fuser Agent Cost	(13) multiplied by (15)	\$42,074	\$73,430	\$114,486	\$160,491	\$187,468	\$115,503
(18) Total B&W Fuser Agent	Sum of (16) and (17)	\$191,945	\$334,996	\$522,301	\$732,184	\$855,257	\$526,942
(19) Total B&W Consumables	Sum of (6), (12), and (18)	\$2,094,022	\$3,654,630	\$5,698,018	\$7,987,729	\$9,330,396	\$5,748,652
Xerox DocuTech 4890							
<i>Black Toner</i>							
(20) Black Toner Charge per Impression	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$0.0015	\$0.0015	\$0.0015	\$0.0015	\$0.0015	
(21) 8.5x11 & 8.5x14 Spot Color Impressions	From Table 4	834,902,418	1,457,128,894	2,271,843,315	3,184,768,371	3,720,099,806	2,292,031,313
(22) Total Black Toner	(20) multiplied by (21)	\$1,233,800	\$2,153,313	\$3,357,280	\$4,706,380	\$5,497,481	\$3,387,113
<i>Color Toner</i>							
(23) Color Toner Charge per Impression	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$0.0025	\$0.0025	\$0.0025	\$0.0025	\$0.0025	
(24) 8.5x11 & 8.5x14 Spot Color Impressions	From Table 4	834,902,418	1,457,128,894	2,271,843,315	3,184,768,371	3,720,099,806	2,292,031,313
(25) Total Color Toner	(23) multiplied by (24)	\$2,096,890	\$3,659,635	\$5,705,822	\$7,998,668	\$9,343,174	\$5,756,525
<i>Fuser Agent</i>							
(26) Fuser Agent Charge per Impression	From Xerox Business Services. See LR-3/MC98-1, Tab C.	\$0.0002	\$0.0002	\$0.0002	\$0.0002	\$0.0002	
(27) 8.5x11 & 8.5x14 Spot Color Impressions	From Table 4	834,902,418	1,457,128,894	2,271,843,315	3,184,768,371	3,720,099,806	2,292,031,313
(28) Total Spot Color Fuser Agent	(26) multiplied by (27)	\$131,199	\$228,977	\$357,004	\$500,464	\$584,587	\$360,176
(29) Total Color Consumables	Sum of (22), (25), and (28)	\$3,461,889	\$6,041,925	\$9,420,105	\$13,205,512	\$15,425,242	\$9,503,814

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Allocation:							
Xerox DocuTech 6180							
(30) 8.5x11 & 8.5x14	Sum of (4), (10), and (16)	\$1,635,022	\$2,853,553	\$4,449,040	\$6,236,857	\$7,285,218	\$4,488,575
(31) 11x17	Sum of (5), (11), and (17)	\$458,999	\$801,077	\$1,248,978	\$1,750,871	\$2,045,178	\$1,260,077
(32) <i>Total</i>	Sum of (30) and (31)	\$2,094,022	\$3,654,630	\$5,698,018	\$7,987,729	\$9,330,396	\$5,748,652
Xerox DocuTech 4880							
(33) 8.5x11 & 8.5x14	Sum of (22), (25), and (28)	\$3,461,889	\$6,041,925	\$9,420,105	\$13,205,512	\$15,425,242	\$9,503,814

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Table 14: Mailing Online Information Systems Fixed Costs

All Information Systems Costs are from LR-1/MC98-1, Attachment 4.

Information Systems	Fixed
<i>Technical Help Desk</i>	
Word Processing / Desk Top Publishing Software	\$8,373
Workstations	\$6,000
Color Printer	\$4,050
Print Driver Software	\$498
Printer Warranty	\$3,645
Training for New Hires/Replacement	\$3,000
<i>Management / Administration</i>	\$2,000
<i>Processing Center</i>	
General	\$0
Data Base	\$0
Data Storage (On-Line)	\$11,706
Data Storage (Backup)	\$100,000
Data Storage (Archive)	\$100,000
Application Servers (Primary & Secondary Processing)	\$406,000
FTP Servers (Primary & Secondary Processing)	\$19,950
Application Servers (Testing and Staging)	\$23,000
Mailing Online Cmd.Ctr. Servers (Testing and Staging)	\$23,000
FTP Servers (Testing and Staging)	\$9,975
Payment Servers (Testing and Staging)	\$9,975
Payment Processing Software (Secondary and Testing/Staging Servers)	\$469
Address List Management Software: Primary, Secondary, Testing/Staging	\$196,584
Encryption Software: Primary, Secondary, Testing/Staging	\$7,200
Word Processing Desk Top Publishing Software	\$3,962

Telecommunication

Setup Dedicated Network Line to Initial Print Sites (T1)	\$35,000
Set up Internet Connect (T1)	\$3,500
Setup Dedicated Network Line to FDMS (T1)	\$3,500

Printer Sites

Initial Print Sites - FTP Servers	\$100,000
Initial Print Sites - Router	\$15,000
Initial Print Sites - Equipment Installation Labor	\$26,000
Initial Print Sites - Equipment Installation Travel Exp.	\$25,000

Total **\$1,147,387**

(1) System Developer **\$1,138,310**
Grand Total, including System Developer Costs **\$2,285,697**

Allocation of Costs:

	1999	2000	Total
Total piece volume	295,665,025	516,014,856	811,679,882
% of 2-year total	36.43%	63.57%	
Fixed IS costs allocated to each year	\$832,595	\$1,453,102	\$2,285,697
 % of b&w 8.5x11 & 8.5x14 impressions	45.57%	45.57%	
% of b&w 11x17 impressions	12.79%	12.79%	
% of spot color 8.5x11 & 8.5x14 impressions	41.63%	41.63%	
 Allocated to b&w, 8.5x11 & 8.5x14	\$379,429	\$662,206	
Allocated to b&w, 11x17	\$106,517	\$185,901	
Allocated to spot color, 8.5x11 & 8.5x14	\$346,649	\$604,995	
Total	\$832,595	\$1,453,102	\$2,285,697

(1) From the USPS Procurement Group. These are USPS costs that will be incurred during continued testing of the Mailing Online service.

Table 14: Mailing Online Information Systems Fixed Costs

Information Systems	Notes	Fixed
<i>Technical Help Desk</i>		
(1) Word Processing / Desk Top Publishing Software	See LR-1/MC98-1, Attachment 2, pp.12-13	\$8,373
(2) Workstations	See LR-1/MC98-1, Attachment 2, p.12	\$6,000
(3) Color Printer	Ibid.	\$4,050
(4) Print Driver Software	Ibid.	\$498
(5) Printer Warranty	Ibid.	\$3,645
(6) Training for New Hires/Replacement	Ibid.	\$3,000
(7) <i>Management / Administration</i>	See LR-1/MC98-1, Attachment 2, p.13	\$2,000
<i>Processing Center</i>		
(8) Data Storage (On-Line)	See LR-1/MC98-1, Attachment 2, p.13	\$11,706
(9) Data Storage (Backup)	See LR-1/MC98-1, Attachment 2, p.14	\$100,000
(10) Data Storage (Archive)	Ibid.	\$100,000
(11) Application Servers (Primary & Secondary Processing)	Ibid.	\$404,000
(12) FTP Servers (Primary & Secondary Processing)	Ibid.	\$19,950
(13) Application Servers (Testing and Staging)	See LR-1/MC98-1, Attachment 2, pp.14-15	\$23,000
(14) Mailing Online Cmd.Ctr. Servers (Testing and Staging)	See LR-1/MC98-1, Attachment 2, p.15	\$23,000
(15) FTP Servers (Testing and Staging)	Ibid.	\$9,975
(16) Payment Servers (Testing and Staging)	See LR-1/MC98-1, Attachment 2, pp.15-16	\$9,975
(17) Payment Processing Software (Secondary and Testing/Staging Servers)	See LR-1/MC98-1, Attachment 2, p.16	\$469
(18) Address List Management Software: Primary, Secondary, Testing/Staging	Ibid.	\$196,584
(19) Encryption Software: Primary, Secondary, Testing/Staging	Ibid.	\$7,200
(20) Word Processing Desk Top Publishing Software	See LR-1/MC98-1, Attachment 2, pp.16-17	\$3,962
<i>Telecommunication</i>		
(21) Setup Dedicated Network Line to Initial Print Sites (T1)	See LR-1/MC98-1, Attachment 2, p.17	\$35,000
(22) Set up Internet Connect (T1)	Ibid.	\$3,500
(23) Setup Dedicated Network Line to FDMS (T1)	Ibid.	\$3,500
<i>Printer Sites</i>		
(24) Initial Print Sites - FTP Servers	Ibid.	\$100,000
(25) Initial Print Sites - Router	Ibid.	\$15,000
(26) Initial Print Sites - Equipment Installation Labor	See LR-1/MC98-1, Attachment 2, p.18	\$26,000
(27) Initial Print Sites - Equipment Installation Travel Exp.	Ibid.	\$25,000
(28) Total	Sum of (1) through (27)	\$1,145,387

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		From the USPS Procurement Group. These are USPS costs that will be incurred during continued testing of the Mailing Online service.			
(29) System Developer				\$1,138,310	
(30) Grand Total, including System Developer Costs		Sum of (28) and (29)		\$2,283,697	
Allocation of Costs:					
(31)	Total piece volume	See Table 4	1999	2000	Total
(32)	% of 2-year total	Yearly volume divided by total for 1999 and 2000	295,665,025	516,014,856	811,679,882
(33)	Fixed IS costs allocated to each year	(30) * (32)	36.43%	63.57%	
			\$831,867	\$1,451,830	\$2,283,697
(34)	% of b&w 8.5x11 & 8.5x14 impressions	See Table 4	45.57%	45.57%	
(35)	% of b&w 11x17 impressions	Ibid.	12.79%	12.79%	
(36)	% of spot color 8.5x11 & 8.5x14 impressions	Ibid.	41.63%	41.63%	
(37)	Allocated to b&w, 8.5x11 & 8.5x14	(33) * (34)	\$379,097	\$661,626	
(38)	Allocated to b&w, 11x17	(33) * (35)	\$106,424	\$185,738	
(39)	Allocated to spot color, 8.5x11 & 8.5x14	(33) * (36)	\$346,346	\$604,466	
(40)	Total	Sum of (37) through (39)	\$831,867	\$1,451,830	\$2,283,697

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Table 15: Mailing Online Information Systems Variable Costs

All Information Systems Costs are from LR-1/MC98-1, Attachment 4.

Information Systems	1999	2000	2001	2002	2003	Total 1999 - 2003
Technical Help Desk						
Technical Help Desk Manager	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$200,000
Technical Help Desk Staff	\$180,000	\$180,000	\$300,000	\$300,000	\$300,000	\$360,000
Workstations	\$0	\$0	\$4,000	\$0	\$0	\$0
Color Printer	\$0	\$0	\$4,050	\$0	\$0	\$0
Print Driver Software	\$0	\$0	\$498	\$0	\$0	\$0
Color printer	\$0	\$0	\$3,645	\$0	\$0	\$0
Training for New Hires/Replacements	\$2,000	\$2,000	\$2,000	\$3,000	\$3,000	\$4,000
Word Processing / Desk Top Publishing Software for Help Desk Staff	\$0	\$0	\$5,582	\$0	\$0	\$0
Management / Administration						
Program Manager (Primary and Secondary Processing)	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$240,000
Processing Center						
System Manager (Primary and Secondary Processing)	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$240,000
Data Base Administrator (Primary and Secondary Processing)	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$300,000
Systems Administration (Primary and Secondary Processing)	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$300,000
Application Software Support (Primary and Secondary Processing)	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$400,000
Application Servers (Prod. Backup)	\$0	\$0	\$100,000	\$100,000	\$100,000	\$0
Address List Management Software Annual Usage Fees	\$10,010	\$10,010	\$10,010	\$10,010	\$10,010	\$20,020
Encryption Software: Primary, Secondary, Testing / Staging	\$720	\$720	\$720	\$720	\$720	\$1,440
Address List Management Software Annual Usage Fees	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$8,000
Telecommunication						
Add'l Sites - Setup Dedicated Network Line to Printer (T1)	\$0	\$24,500	\$28,000	\$0	\$0	\$24,500
T1 Annual Charge (Monthly X12), USPS to all print sites	\$420,000	\$714,000	\$1,050,000	\$1,050,000	\$1,050,000	\$1,134,000
T1 Annual Charge (Monthly X12), USPS to FDMS	\$42,000	\$42,000	\$42,000	\$42,000	\$42,000	\$84,000
Help Desk 1-800 line	\$7,894	\$10,685	\$15,279	\$19,388	\$17,939	\$18,579
Printer Sites						
Add'l Sites - FTP Servers	\$0	\$70,000	\$80,000	\$0	\$0	\$70,000
Add'l Sites - Routers	\$0	\$10,500	\$12,000	\$0	\$0	\$10,500
Add'l Sites Equipment Install Labor @ \$65/hr.	\$0	\$18,200	\$20,800	\$0	\$0	\$18,200
Add'l Sites Equipment Install Travel Expenses	\$0	\$17,500	\$20,000	\$0	\$0	\$17,500
All sites USPS Equipment Maintenance @ \$65/hr.	\$52,000	\$88,400	\$130,000	\$130,000	\$130,000	\$140,400
TOTAL	\$1,558,624	\$2,032,515	\$2,672,584	\$2,499,118	\$2,497,669	\$3,581,139
Allocation of Costs:						
% of b&w 8.5x11 & 8.5x14 impressions	45.57%	45.57%	45.57%	45.57%	45.57%	
% of b&w 11x17 impressions	12.79%	12.79%	12.79%	12.79%	12.79%	
% of spot color 8.5x11 & 8.5x14 impressions	41.63%	41.63%	41.63%	41.63%	41.63%	
Allocated to b&w, 8.5x11 & 8.5x14	\$710,294	\$926,255	\$1,217,948	\$1,138,895	\$1,138,234	\$1,836,549
Allocated to b&w, 11x17	\$199,401	\$260,027	\$341,914	\$319,722	\$319,536	\$1,440,600
Allocated to spot color, 8.5x11 & 8.5x14	\$648,929	\$846,233	\$1,112,724	\$1,040,502	\$1,039,899	\$1,495,162
TOTAL	\$1,558,624	\$2,032,515	\$2,672,584	\$2,499,118	\$2,497,669	\$3,581,139

Table 16: Mailing Online Paper and Envelopes Cost

Projections are from WEFA, December 1997, U.S. Economic Outlook. See LR-3/MC98-1, Tab E.

Paper & Envelope Prices	Notes	Base - 1998	% change '98 - '99	Prices - 1999	% change '99 - '00	Prices - 2000	% change '00 - '01	Prices - 2001	% change '01 - '02	Prices - 2002	% change '02 - '03	Prices - 2003
<i>Paper Prices per Page</i>												
8.5x11	From Cauthorne Paper Co. Quantity: 5,000 sheets	\$0.0047	4.00%	\$0.0049	3.20%	\$0.0050	2.40%	\$0.0052	2.50%	\$0.0053	2.50%	\$0.0054
8.5x14	Ibid.	\$0.0051	4.00%	\$0.0053	3.20%	\$0.0055	2.40%	\$0.0056	2.50%	\$0.0058	2.50%	\$0.0059
11x17	From Cauthorne Paper Co. Quantity: 2,500	\$0.0098	4.00%	\$0.0102	3.20%	\$0.0105	2.40%	\$0.0108	2.50%	\$0.0111	2.50%	\$0.0113
<i>Envelope Prices</i>												
#10 - no window & logo	From Westvaco. Quantity: 5,000	\$0.0262	4.00%	\$0.0272	3.20%	\$0.0281	2.40%	\$0.0288	2.50%	\$0.0295	2.50%	\$0.0303
#10 - single window & logo	Ibid.	\$0.0283	4.00%	\$0.0294	3.20%	\$0.0304	2.40%	\$0.0311	2.50%	\$0.0319	2.50%	\$0.0327
Flat-sized (9x12) - no window, no logo	From Westvaco. Quantity: 1,000	\$0.0450	4.00%	\$0.0468	3.20%	\$0.0483	2.40%	\$0.0494	2.50%	\$0.0507	2.50%	\$0.0519
Flat-sized (9x12) - no window, logo	Ibid.	\$0.0652	4.00%	\$0.0678	3.20%	\$0.0700	2.40%	\$0.0716	2.50%	\$0.0734	2.50%	\$0.0753

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Table 15: Mailing Online Information Systems Variable Costs

Information Systems	Notes	1999	2000	2001	2002	2003	Total 1999 - 2000
<i>Technical Help Desk</i>							
(1) Technical Help Desk Manager	See LR-1/MC98-1, Attachment 2, p.12	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$200,000
(2) Technical Help Desk Staff	Ibid.	\$180,000	\$180,000	\$300,000	\$300,000	\$300,000	\$360,000
(3) Workstations	Ibid.	\$0	\$0	\$4,000	\$0	\$0	\$0
(4) Color Printer	Ibid.	\$0	\$0	\$4,050	\$0	\$0	\$0
(5) Print Driver Software	Ibid.	\$0	\$0	\$498	\$0	\$0	\$0
(6) Color printer	Ibid.	\$0	\$0	\$3,645	\$0	\$0	\$0
(7) Training for New Hires/Replacements	Ibid.	\$2,000	\$2,000	\$2,000	\$3,000	\$3,000	\$4,000
(8) Word Processing / Desk Top Publishing Software for Help Desk Staff	See LR-1/MC98-1, Attachment 2, pp.12-13	\$0	\$0	\$5,582	\$0	\$0	\$0
<i>Management / Administration</i>							
(9) Program Manager (Primary and Secondary Processing)	See LR-1/MC98-1, Attachment 2, p.13	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$240,000
<i>Processing Center</i>							
(10) System Manager (Primary and Secondary Processing)	Ibid.	\$120,000	\$120,000	\$120,000	\$120,000	\$120,000	\$240,000
(11) Data Base Administrator (Primary and Secondary Processing)	Ibid.	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$300,000
(12) Systems Administration (Primary and Secondary Processing)	Ibid.	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$300,000
(13) Application Software Support (Primary and Secondary Processing)	See LR-1/MC98-1, Attachment 2, p.14	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$400,000
(14) Application Servers (Prod. Backup)	Ibid.	\$0	\$0	\$100,000	\$100,000	\$100,000	\$0
(15) Address List Management Software Annual Usage Fees	See LR-1/MC98-1, Attachment 2, p.16	\$10,010	\$10,010	\$10,010	\$10,010	\$10,010	\$20,020
(16) Encryption Software: Primary, Secondary, Testing / Staging	Ibid.	\$720	\$720	\$720	\$720	\$720	\$1,440
(17) Address List Management Software Annual Usage Fees	Ibid.	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$8,000
<i>Telecommunication</i>							
(18) Add'l Sites - Setup Dedicated Network Line to Printer (T1)	See LR-1/MC98-1, Attachment 2, p.17	\$0	\$24,500	\$28,000	\$0	\$0	\$24,500
(19) T1 Annual Charge (Monthly X12), USPS to all print sites	Ibid.	\$420,000	\$714,000	\$1,050,000	\$1,050,000	\$1,050,000	\$1,134,000
(20) T1 Annual Charge (Monthly X12), USPS to FDMS	Ibid.	\$42,000	\$42,000	\$42,000	\$42,000	\$42,000	\$84,000
(21) Help Desk 1-800 line	Ibid.	\$7,894	\$10,685	\$15,279	\$19,388	\$17,939	\$18,579
<i>Printer Sites</i>							
(22) Add'l Sites - FTP Servers	Ibid.	\$0	\$70,000	\$80,000	\$0	\$0	\$70,000
(23) Add'l Sites - Routers	Ibid.	\$0	\$10,500	\$12,000	\$0	\$0	\$10,500
(24) Add'l Sites Equipment Install Labor @ \$65/hr.	See LR-1/MC98-1, Attachment 2, p.18	\$0	\$18,200	\$20,800	\$0	\$0	\$18,200
(25) Add'l Sites Equipment Install Travel Expenses	Ibid.	\$0	\$17,500	\$20,000	\$0	\$0	\$17,500
(26) All sites USPS Equipment Maintenance @ \$65/hr.	Ibid.	\$52,000	\$88,400	\$130,000	\$130,000	\$130,000	\$140,400
(27) TOTAL	Sum of (1) through (26)	\$1,558,624	\$2,032,515	\$2,672,584	\$2,499,118	\$2,497,669	\$3,591,139
<i>Allocation of Costs:</i>							
(28) % of b&w 8.5x11 & 8.5x14 impressions	See Table 4	45.57%	45.57%	45.57%	45.57%	45.57%	
(29) % of b&w 11x17 impressions	Ibid.	12.79%	12.79%	12.79%	12.79%	12.79%	
(30) % of spot color 8.5x11 & 8.5x14 impressions	Ibid.	41.63%	41.63%	41.63%	41.63%	41.63%	
(31) Allocated to b&w, 8.5x11 & 8.5x14	(27) * (28)	\$710,294	\$926,255	\$1,217,946	\$1,138,895	\$1,138,234	\$1,636,549
(32) Allocated to b&w, 11x17	(27) * (29)	\$199,401	\$260,027	\$341,914	\$319,722	\$319,536	\$1,440,600
(33) Allocated to spot color, 8.5x11 & 8.5x14	(27) * (30)	\$648,929	\$846,233	\$1,112,724	\$1,040,502	\$1,039,898	\$1,495,162
(34) TOTAL	Sum of (31) through (33)	\$1,558,624	\$2,032,515	\$2,672,584	\$2,499,118	\$2,497,669	\$3,591,139

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